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NEWS 10 JAN 07 WPIDS, WPINDEX, and WPIX enhanced Japanese Patent
Classification Data
NEWS 11 FEB 02 Simultaneous left and right truncation (SLART) added
for CERAB, COMPUAB, ELCOM, and SOLIDSTATE
NEWS 12 FEB 02 GENBANK enhanced with SET PLURALS and SET SPELLING
NEWS 13 FEB 06 Patent sequence location (PSL) data added to USGENE
NEWS 14 FEB 10 COMPENDEX reloaded and enhanced
NEWS 15 FEB 11 WTEXTILES reloaded and enhanced
NEWS 16 FEB 19 New patent-examiner citations in 300,000 CA/CAPLUS
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NEWS 17 FEB 19 Increase the precision of your patent queries -- use
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NEWS 18 FEB 23 Several formats for image display and print options
discontinued in USPATFULL and USPAT2
NEWS 19 FEB 23 MEDLINE now offers more precise author group fields
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NEWS 20 FEB 23 TOXCENTER updates mirror those of MEDLINE - more
precise author group fields and 2009 MeSH terms
NEWS 21 FEB 23 Three million new patent records blast AEROSPACE into
STN patent clusters
NEWS 22 FEB 25 USGENE enhanced with patent family and legal status
display data from INPADOCDB
NEWS 23 MAR 06 INPADOCDB and INPAFAMDB enhanced with new display
formats
NEWS 24 MAR 11 EPFULL backfile enhanced with additional full-text
applications and grants
NEWS 25 MAR 11 ESBIOBASE reloaded and enhanced
NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

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COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.22	0.22

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STRUCTURE FILE UPDATES: 17 MAR 2009 HIGHEST RN 1122748-29-1
DICTIONARY FILE UPDATES: 17 MAR 2009 HIGHEST RN 1122748-29-1

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<http://www.cas.org/support/stngen/stdoc/properties.html>

=> e N,N-dimethylethanolammonium formate/cn
E1 1 N,N-DIMETHYLETHANOLAMINOGALLANE DIMER/CN
E2 1 N,N-DIMETHYLETHANOLAMMONIUM/CN
E3 0 --> N,N-DIMETHYLETHANOLAMMONIUM FORMATE/CN
E4 1 N,N-DIMETHYLETHENESULFONAMIDE/CN
E5 1 N,N-DIMETHYLETHYLAMINE/CN
E6 1 N,N-DIMETHYLETHYLAMINE ALANE/CN
E7 1 N,N-DIMETHYLETHYLAMINE HYDRIODIDE/CN
E8 1 N,N-DIMETHYLETHYLAMINE HYDROCHLORIDE/CN
E9 1 N,N-DIMETHYLETHYLENEDIAMINE/CN
E10 1 N,N-DIMETHYLETHYLENEDIAMINE CYCLIC UREA/CN
E11 1 N,N-DIMETHYLETHYLENEDIAMINE DIHYDROCHLORIDE/CN
E12 1 N,N-DIMETHYLETHYLENEDIAMINE DIPROTONATED/CN

=> e e2

E1 1 N,N-DIMETHYLETHANOLAMINIC METHACRYLATE-TRIMETHYLOLPROPANE TR
 IMETHACRYLATE COPOLYMER/CN
 E2 1 N,N-DIMETHYLETHANOLAMINOGALLANE DIMER/CN
 E3 1 --> N,N-DIMETHYLETHANOLAMMONIUM/CN
 E4 1 N,N-DIMETHYLETHENESULFONAMIDE/CN
 E5 1 N,N-DIMETHYLETHYLAMINE/CN
 E6 1 N,N-DIMETHYLETHYLAMINE ALANE/CN
 E7 1 N,N-DIMETHYLETHYLAMINE HYDRIDIODE/CN
 E8 1 N,N-DIMETHYLETHYLAMINE HYDROCHLORIDE/CN
 E9 1 N,N-DIMETHYLETHYLENEDIAMINE/CN
 E10 1 N,N-DIMETHYLETHYLENEDIAMINE CYCLIC UREA/CN
 E11 1 N,N-DIMETHYLETHYLENEDIAMINE DIHYDROCHLORIDE/CN
 E12 1 N,N-DIMETHYLETHYLENEDIAMINE DIPROTONATED/CN

=> s e3;d

L1 1 "N,N-DIMETHYLETHANOLAMMONIUM"/CN

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2009 ACS on STN

RN 36833-64-4 REGISTRY

ED Entered STN: 16 Nov 1984

CN Ethanol, 2-(dimethylamino)-, conjugate acid (1:1) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Ethanol, 2-(dimethylamino)-, conjugate monoacid (9CI)

OTHER NAMES:

CN 2-(N,N-Dimethylamino)ethanol conjugate acid

CN N,N-Dimethyl-2-hydroxyethylammonium cation

CN N,N-Dimethylethanolammonium

MF C4 H11 N O . H

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

CRN (108-01-0)

Me₂N-CH₂-CH₂-OH

● H⁺

15 REFERENCES IN FILE CA (1907 TO DATE)

3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

16 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file caplus;s us20070185330/pn

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

10.28

10.50

FILE 'CAPLUS' ENTERED AT 13:01:52 ON 19 MAR 2009

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FILE COVERS 1907 - 19 Mar 2009 VOL 150 ISS 12
FILE LAST UPDATED: 18 Mar 2009 (20090318/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

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This file contains CAS Registry Numbers for easy and accurate substance identification.

L2 1 US20070185330/PN

=> d all

L2 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2005:1090138 CAPLUS
DN 143:386681
ED Entered STN: 12 Oct 2005
TI Ionic liquids containing protonated primary, secondary or tertiary ammonium ions
IN Walker, Adam John
PA The University of York, UK
SO Brit. UK Pat. Appl., 62 pp.
CODEN: BAXXDU
DT Patent
LA English
IC ICM C07C215-08
ICS C07C215-12; C07C217-30
CC 23-4 (Aliphatic Compounds)
Section cross-reference(s): 45

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2412912	A	20051012	GB 2005-6984	20050407
	GB 2412912	B	20070711		
	AU 2005232025	A1	20051020	AU 2005-232025	20050407
	CA 2563458	A1	20051020	CA 2005-2563458	20050407
	WO 2005097731	A2	20051020	WO 2005-GB1364	20050407
	WO 2005097731	A3	20051124		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CN 1997620	A	20070711	CN 2005-80018219	20050407

EP 1805131	A2	20070711	EP 2005-735988	20050407
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
JP 2007532525	T	20071115	JP 2007-506841	20050407
MX 2006011531	A	20070326	MX 2006-11531	20061005
IN 2006KN03208	A	20070608	IN 2006-KN3208	20061103
KR 2007031302	A	20070319	KR 2006-723342	20061107
US 20070185330	A1	20070809	US 2007-599694	20070119 <--
PRAI GB 2004-7908	A	20040407		
WO 2005-GB1364	W	20050407		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
GB 2412912	ICM	C07C215-08
	ICS	C07C215-12; C07C217-30
	IPCI	C07C0215-00 [I,C]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C]; C07C0217-30 [I,A]
	IPCR	C07C0215-00 [I,C]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0215-40 [I,A]; C07C0217-00 [I,C]; C07C0217-30 [I,A]
AU 2005232025	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]
	IPCR	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0215-40 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
CA 2563458	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	B01J0031-02 [I,A]; B01J0031-04 [I,A]; C07C0215-40 [I,A]; C07C0215-00 [I,C*]
	IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; B01J0031-02 [I,C]; B01J0031-02 [I,A]; B01J0031-04 [I,A]; B01J0031-04 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
WO 2005097731	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-00 [ICM,7]; C07C0215-40 [ICS,7]; B01J0031-04 [ICS,7]; B01J0031-02 [ICS,7]
	IPCR	C07C0215-00 [I,C*]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0215-40 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
CN 1997620	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-40 [I,A]; C07C0215-00 [I,C*]; B01J0031-04 [I,A]; B01J0031-02 [I,A]
	IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
EP 1805131	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-40 [I,A]; C07C0215-00 [I,C*]
	IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
JP 2007532525	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-40 [I,A]; C07C0215-00 [I,C*]; C07C0311-03 [I,A]; C07C0311-00 [I,C*]
	IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0311-03 [I,A]; C07C0311-00 [I,C]; C07C0311-03 [I,A]
MX 2006011531	FTERM	4H006/AA01; 4H006/AA03; 4H006/AB80
	IPCI	B01J0031-02 [I,C*]; B01J0031-04 [I,C*]; C07C0215-40 [I,A]; C07C0215-00 [I,C*]
IN 2006KN03208	IPCI	C07C0215-40 [ICM,7]; C07C0215-00 [ICS,7]
KR 2007031302	IPCI	C07C0215-40 [I,A]; C07C0215-00 [I,A]
US 20070185330	IPCI	C07C0215-02 [I,A]; C07C0215-00 [I,C*]; C07D0211-02 [I,A]; C07D0211-00 [I,C*]

NCL 546/184.000; 564/281.000

OS MARPAT 143:386681

AB The present invention relates to ionic liqs. comprising an anion and a cation wherein the cation is a primary, secondary or tertiary ammonium ion containing a protonated nitrogen atom. The invention also provides processes for the manufacture of ionic liqs. For example, N,N-dimethylethanolammonium glycolate (I) was prepared by gradually adding glycolic acid to an alc. solution of N,N-dimethylethanolamine; after completion and neutralization, the cold alc. solution was filtered, solvent removed, then frozen in liquid nitrogen and lyophilized in vacuo. After gradually allowing the sample to warm to room temperature, 32.85 g (99% yield) of I as a pale yellow liquid was isolated. Preferred ionic liqs. contain ethanolammonium, diethanolammonium, N-butyl-diethanolammonium, N,N-dimethylethanolammonium, N-methylethanolammonium, N,N-di(methoxyethyl)ammonium and 1-(3-hydroxypropyl)putrescinium ions as cations.

ST amine acid; ammonium ionic liq prepn; primary ammonium ion prepn ionic liq; secondary ammonium ion prepn ionic liq; tertiary ammonium ion prepn ionic liq

IT Oxidation

(enzymic; demonstration of application of ionic liqs. in enzymic oxidation of methanol to formaldehyde)

IT Green chemistry

Ionic liquids

(preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT Quaternary ammonium compounds, preparation

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT Acids, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT Solvents

(preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions for use as solvent in industrial and com. applications)

IT Amines, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(primary; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT Carboxylic acids, uses

Sulfonic acids, uses

RL: NUU (Other use, unclassified); USES (Uses)

(salts, anion component for ionic liquid; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT Amines, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(secondary; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT Amines, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(tertiary; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 56-14-4, Succinate, uses 57-60-3, Pyruvate, uses 63-36-5, Salicylate, uses 71-47-6, Formate, uses 71-50-1, Acetate, uses 71-52-3, Hydrogen carbonate, uses 72-03-7, Propanoate, uses 74-81-7, Octanoate, uses 113-21-3, Lactate, uses 126-44-3, Citrate, uses 142-42-7, Fumarate, uses 149-61-1, Malate 150-43-6, uses 151-33-7, Hexanoate, uses 338-70-5, uses 461-55-2, Butanoate, uses 666-14-8, uses 766-76-7, Benzoate, uses 769-61-9, Mandelate 3342-79-8, Nonanoate 3398-75-2, Decanoate 3715-17-1, Tartrate, uses 3812-32-6, Carbonate, uses 7563-37-3, Heptanoate 7631-42-7, Phenylacetate, uses 10023-74-2, Pentanoate, uses 12627-13-3, Silicate 14066-19-4, Hydrogen phosphate, uses 14066-20-7, Dihydrogen phosphate, uses 14265-44-2, Phosphate, uses 14477-72-6, Trifluoroacetate ion, uses 14797-55-8, Nitrate, uses 14808-79-8, Sulphate, uses 14874-70-5, Tetrafluoroborate 14996-02-2, Hydrogen sulfate, uses 16053-58-0, Methanesulfonate anion 16887-00-6, Chloride, uses 16919-18-9, Hexafluorophosphate 17121-12-9, Metaphosphate (P40124-) 20461-54-5, Iodide, uses 20938-62-9, Pantothenate 24959-67-9, Bromide, uses 37181-39-8, Trifluoromethanesulfonate 41824-21-9, Crotonate 44864-55-3 45048-62-2 49681-69-8, Hydrogen tartrate, uses 59561-61-4 86848-98-8 86848-99-9 97901-86-5 98837-98-0 130434-58-1 328238-56-8 866621-22-9

RL: NUU (Other use, unclassified); USES (Uses)

(anion component for ionic liquid; preparation and methods for manufacture of ionic

liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 176158-74-0P

RL: BSU (Biological study, unclassified); IMF (Industrial manufacture);

NUU (Other use, unclassified); PRP (Properties); SPN (Synthetic

preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(biodegradn. anal. of ionic liquid; preparation and methods for manufacture

of ionic

liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 20740-76-5 22852-66-0, Ethanolamine conjugate acid 26265-71-4

36833-63-3 36833-64-4 65591-62-0 90578-97-5 866567-32-0

866567-33-1 866567-34-2

RL: NUU (Other use, unclassified); USES (Uses)

(cation component for ionic liquid; preparation and methods for manufacture

of

ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 67-56-1, Methanol, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(demonstration of application of ionic liqs. in enzymic oxidation of methanol to formaldehyde)

IT 50-00-0P, Formaldehyde, preparation

RL: SPN (Synthetic preparation); PREP (Preparation)

(demonstration of application of ionic liqs. in enzymic oxidation of methanol to formaldehyde)

IT 2471-06-9P 2604-13-9P 2805-17-6P 3178-20-9P 4337-66-0P

5988-51-2P 7487-79-8P 16530-72-6P 16830-40-3P 17618-31-4P

17618-32-5P 17863-38-6P 18394-23-5P 20261-59-0P 20475-13-2P

20748-72-5P 21829-52-7P 23251-72-1P, Diethanolamine acetate

23349-61-3P 25859-29-4P 26764-31-8P 28098-03-5P 28129-21-7P,

Diethanolamine hydrobromide 29194-47-6P 29867-71-8P 29867-72-9P

29867-75-2P 29868-00-6P 29868-01-7P 29870-14-2P 29870-15-3P

29870-18-6P 29870-19-7P 29870-25-5P 29870-26-6P 29870-27-7P

29870-29-9P 30718-92-4P 30933-06-3P 31086-83-6P 31889-13-1P

35423-90-6P 38491-11-1P 38739-74-1P 49753-18-6P 49753-20-0P

51264-32-5P 51276-44-9P 53226-35-0P 53562-95-1P 53926-87-7P

54300-24-2P 55756-39-3P 56409-18-8P 56669-87-5P 57117-29-0P

58937-21-6P 59101-30-3P 59866-70-5P 60395-28-0P 62036-98-0P

63517-71-5P 63517-72-6P 64601-03-2P 64601-04-3P 64601-14-5P

67303-52-0P	67384-57-0P	68141-00-4P	68141-46-8P	68391-54-8P,
Diethanolamine	formate	68568-51-4P	68815-69-0P	68833-69-2P
68860-57-1P	68945-90-4P	69362-00-1P	69362-01-2P	75478-96-5P
76788-90-4P	77534-69-1P	77534-73-7P	79266-74-3P	82801-62-5P
84110-42-9P	84145-30-2P	84145-60-8P	84176-56-7P	86683-38-7P
86683-39-8P	88331-27-5P	89855-93-6P	90000-02-5P	90434-46-1P
93882-26-9P	93882-27-0P	93942-28-0P	93942-29-1P	95332-67-5P
98005-86-8P	98837-33-3P	101901-23-9P	103079-19-2P	108067-35-2P
109962-24-5P	111318-69-5P	116033-27-3P	117472-14-7P	126050-30-4P
134227-25-1P	135691-53-1P	137360-57-7P	138036-64-3P	156814-01-6P
164460-12-2P	181180-62-1P	205490-53-5P	205490-69-3P	209052-82-4P
210040-56-5P	252280-99-2P	327156-58-1P	372169-26-1P	372169-30-7P
392292-52-3P	815574-85-7P	857086-60-3P	857086-63-6P	866567-31-9P
866567-31-9P	866567-35-3P	866567-36-4P	866567-37-5P	866567-38-6P
866567-39-7P	866567-40-0P	866567-41-1P	866567-42-2P	866567-43-3P
866567-44-4P	866567-45-5P	866567-46-6P	866567-47-7P	866567-48-8P
866567-49-9P	866567-50-2P	866567-51-3P	866567-52-4P	866567-53-5P
866567-54-6P	866567-55-7P	866567-56-8P	866567-57-9P	866567-58-0P
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866567-65-9P	866567-67-1P	866567-69-3P	866567-70-6P	866567-71-7P
866567-72-8P	866567-73-9P	866567-74-0P	866567-75-1P	866567-76-2P
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RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN
(Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation and methods for manufacture of ionic liqs. containing

protonated

primary, secondary or tertiary ammonium ions)

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RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN
 (Synthetic preparation); PREP (Preparation); USES (Uses)
 (preparation and methods for manufacture of ionic liqs. containing

protonated

primary, secondary or tertiary ammonium ions)				
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	866571-75-7P	866571-76-8P	866571-77-9P	866571-78-0P
	866571-80-4P	866571-81-5P	866571-82-6P	866571-83-7P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN
 (Synthetic preparation); PREP (Preparation); USES (Uses)
 (preparation and methods for manufacture of ionic liqs. containing

protonated

primary, secondary or tertiary ammonium ions)	
IT	79-14-1, Glycolic acid, reactions 102-79-4, N-Butyldiethanolamine
	108-01-0, N,N-Dimethylethanolamine 82113-65-3
	RL: RCT (Reactant); RACT (Reactant or reagent)
	(preparation and methods for manufacture of ionic liqs. containing

protonated

primary, secondary or tertiary ammonium ions)	
RE.CNT	7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
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=> s dimethylethanolammonium and formate

40 DIMETHYLETHANOLAMMONIUM
 45920 FORMATE

L3 2 DIMETHYLETHANOLAMMONIUM AND FORMATE

=> d 1 2 all

L3 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2008:165841 CAPLUS

DN 148:238708

ED Entered STN: 10 Feb 2008

TI Solvent and Rotational Relaxation of Coumarin 153 in a Protic Ionic Liquid
 Dimethylethanolammonium Formate

AU Seth, Debabrata; Sarkar, Souravi; Sarkar, Nilmoni

CS Department of Chemistry, Indian Institute of Technology, Kharagpur, 721
 302, India

SO Journal of Physical Chemistry B (2008), 112(9), 2629-2636

CODEN: JPCBFK; ISSN: 1520-6106

PB American Chemical Society

DT Journal

LA English

CC 22-9 (Physical Organic Chemistry)

AB The solvent relaxation and orientational dynamics of coumarin 153 (C-153)
 was investigated in N,N-dimethylethanolammonium formate

(DAF) with a variation of temperature DAF is a protic room-temperature ionic
 liquid,

comprised of nonarom. cations. Both solvent relaxation and orientational
 dynamics of C-153 in DAF are linearly well-correlated with the bulk
 viscosity at different temps. We optimized the geometry of DAF using
 quantum chemical calcs. using d. functional theory methods. The optimized
 structure of DAF shows a nonbonded interaction between cation and anion,
 which suggests that a hydrogen bond is formed between hydrogen atoms
 attached to the nitrogen atom of the cation with the oxygen atom of the
 anion in DAF.

ST solvent rotational relaxation coumarin protic ionic liq

dimethylethanolammonium formate

IT Molecular structure

(optimized; solvent and rotational relaxation of coumarin 153 in protic
 ionic liquid dimethylethanolammonium formate)

IT Fluorescence

Hydrogen bond

Ionic liquids

Molecular orientation

Molecular rotation

Solvation

(solvent and rotational relaxation of coumarin 153 in protic ionic liquid
 dimethylethanolammonium formate)

IT 59101-30-3

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical
 process); PRP (Properties); PROC (Process); USES (Uses)

(solvent and rotational relaxation of coumarin 153 in protic ionic liquid
 dimethylethanolammonium formate)

IT 53518-18-6, Coumarin 153

RL: PRP (Properties)

(solvent and rotational relaxation of coumarin 153 in protic ionic liquid

dimethylethanolammonium formate)

RE.CNT 105 THERE ARE 105 CITED REFERENCES AVAILABLE FOR THIS RECORD
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AN 2005:1090138 CAPLUS

DN 143:386681

ED Entered STN: 12 Oct 2005

TI Ionic liquids containing protonated primary, secondary or tertiary ammonium ions

IN Walker, Adam John

PA The University of York, UK

SO Brit. UK Pat. Appl., 62 pp.

CODEN: BAXXD0

DT Patent

LA English

IC ICM C07C215-08

ICS C07C215-12; C07C217-30

CC 23-4 (Aliphatic Compounds)

Section cross-reference(s): 45

FAN.CNT 1

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PI	GB 2412912	A	20051012	GB 2005-6984	20050407
	GB 2412912	B	20070711		
	AU 2005232025	A1	20051020	AU 2005-232025	20050407
	CA 2563458	A1	20051020	CA 2005-2563458	20050407
	WO 2005097731	A2	20051020	WO 2005-GB1364	20050407
	WO 2005097731	A3	20051124		
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	JP 2007532525	T	20071115	JP 2007-506841	20050407
	MX 2006011531	A	20070326	MX 2006-11531	20061005
	IN 2006KN03208	A	20070608	IN 2006-KN3208	20061103
	KR 2007031302	A	20070319	KR 2006-723342	20061107
	US 20070185330	A1	20070809	US 2007-599694	20070119
FRAI	GB 2004-7908	A	20040407		
	WO 2005-GB1364	W	20050407		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
GB	2412912	ICM	C07C215-08
		ICS	C07C215-12; C07C217-30
		IPCI	C07C0215-00 [I,C]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C]; C07C0217-30 [I,A]
		IPCR	C07C0215-00 [I,C]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0215-40 [I,A]; C07C0217-00 [I,C]; C07C0217-30 [I,A]
AU	2005232025	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]
		IPCR	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
CA	2563458	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	B01J0031-02 [I,A]; B01J0031-04 [I,A]; C07C0215-40 [I,A]; C07C0215-00 [I,C*]
		IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; B01J0031-02 [I,C]; B01J0031-02 [I,A]; B01J0031-04 [I,C]; B01J0031-04 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
WO	2005097731	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [ICM,7]; C07C0215-40 [ICS,7]; B01J0031-04 [ICS,7]; B01J0031-02 [ICS,7]
		IPCR	C07C0215-00 [I,C*]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0215-40 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30

CN 1997620	IPCI	C07C0215-40 [I,A]; C07C0215-00 [I,C*]; B01J0031-04 [I,A]; B01J0031-02 [I,A]
	IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
EP 1805131	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-40 [I,A]; C07C0215-00 [I,C*]
	IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
JP 2007532525	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-40 [I,A]; C07C0215-00 [I,C*]; C07C0311-03 [I,A]; C07C0311-00 [I,C*]
	IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]; C07C0311-00 [I,C]; C07C0311-03 [I,A]
MX 2006011531	FTERM	4H006/AA01; 4H006/AA03; 4H006/AB80
	IPCI	B01J0031-02 [I,C*]; B01J0031-04 [I,C*]; C07C0215-40 [I,A]; C07C0215-00 [I,C*]
IN 2006KN03208	IPCI	C07C0215-40 [I,C,M,7]; C07C0215-00 [I,C,S,7]
KR 2007031302	IPCI	C07C0215-40 [I,A]; C07C0215-00 [I,A]
US 20070185330	IPCI	C07C0215-02 [I,A]; C07C0215-00 [I,C*]; C07D0211-02 [I,A]; C07D0211-00 [I,C*]
	NCL	546/184.000; 564/281.000

OS MARPAT 143:386681

AB The present invention relates to ionic liqs. comprising an anion and a cation wherein the cation is a primary, secondary or tertiary ammonium ion containing a protonated nitrogen atom. The invention also provides processes for the manufacture of ionic liqs. For example, N,N-dimethylethanolammonium glycolate (I) was prepared by gradually adding glycolic acid to an alc. solution of N,N-dimethylethanolamine; after completion and neutralization, the cold alc. solution was filtered, solvent removed, then frozen in liquid nitrogen and lyophilized in vacuo. After gradually allowing the sample to warm to room temperature, 32.85 g (99% yield) of I as a pale yellow liquid was isolated. Preferred ionic liqs. contain ethanolammonium, diethanolammonium, N-butyl-diethanolammonium, N,N-dimethylethanolammonium, N-methylethanolammonium, N,N-di(methoxyethyl)ammonium and 1-(3-hydroxypropyl)putrescinium ions as cations.

ST amine acid; ammonium ionic liq prepn; primary ammonium ion prepn ionic liq; secondary ammonium ion prepn ionic liq; tertiary ammonium ion prepn ionic liq

IT Oxidation
(enzymic; demonstration of application of ionic liqs. in enzymic oxidation of methanol to formaldehyde)

IT Green chemistry
Ionic liquids
(preparation and methods for manufacture of ionic liqs. containing protonated

primary, secondary or tertiary ammonium ions)

IT Quaternary ammonium compounds, preparation
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation and methods for manufacture of ionic liqs. containing protonated

primary, secondary or tertiary ammonium ions)

IT Acids, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and methods for manufacture of ionic liqs. containing protonated

primary, secondary or tertiary ammonium ions)

IT Solvents

(preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions for use as solvent in industrial and com. applications)

IT Amines, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (primary; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT Carboxylic acids, uses
 Sulfonic acids, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (salts, anion component for ionic liquid; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT Amines, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (secondary; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT Amines, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (tertiary; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 56-14-4, Succinate, uses 57-60-3, Pyruvate, uses 63-36-5, Salicylate, uses 71-47-6, Formate, uses 71-50-1, Acetate, uses 71-52-3, Hydrogen carbonate, uses 72-03-7, Propanoate, uses 74-81-7, Octanoate, uses 113-21-3, Lactate, uses 126-44-3, Citrate, uses 142-42-7, Fumarate, uses 149-61-1, Malate 150-43-6, uses 151-33-7, Hexanoate, uses 338-70-5, uses 461-55-2, Butanoate, uses 666-14-8, uses 766-76-7, Benzoate, uses 769-61-9, Mandelate 3342-79-8, Nonanoate 3398-75-2, Decanoate 3715-17-1, Tartrate, uses 3812-32-6, Carbonate, uses 7563-37-3, Heptanoate 7631-42-7, Phenylacetate, uses 10023-74-2, Pentanoate, uses 12627-13-3, Silicate 14066-19-4, Hydrogen phosphate, uses 14066-20-7, Dihydrogen phosphate, uses 14265-44-2, Phosphate, uses 14477-72-6, Trifluoroacetate ion, uses 14797-55-8, Nitrate, uses 14808-79-8, Sulphate, uses 14874-70-5, Tetrafluoroborate 14996-02-2, Hydrogen sulfate, uses 16053-58-0, Methanesulfonate anion 16887-00-6, Chloride, uses 16919-18-9, Hexafluorophosphate 17121-12-9, Metaphosphate (P4O12-) 20461-54-5, Iodide, uses 20938-62-9, Pantothenate 24959-67-9, Bromide, uses 37181-39-8, Trifluoromethanesulfonate 41824-21-9, Crotonate 44864-55-3 45048-62-2 49681-69-8, Hydrogen tartrate, uses 59561-61-4 86848-98-8 86848-99-9 97901-86-5 98837-98-0 130434-58-1 328238-56-8 866621-22-9
 RL: NUU (Other use, unclassified); USES (Uses)
 (anion component for ionic liquid; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 176158-74-0P
 RL: BSU (Biological study, unclassified); IMF (Industrial manufacture); NUU (Other use, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (biodegradn. anal. of ionic liquid; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 20740-76-5 22852-66-0, Ethanolamine conjugate acid 26265-71-4 36833-63-3 36833-64-4 65591-62-0 90578-97-5 866567-32-0 866567-33-1 866567-34-2
 RL: NUU (Other use, unclassified); USES (Uses)
 (cation component for ionic liquid; preparation and methods for manufacture of

ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 67-56-1, Methanol, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(demonstration of application of ionic liqs. in enzymic oxidation of methanol to formaldehyde)

IT 50-00-0P, Formaldehyde, preparation

RL: SPN (Synthetic preparation); PREP (Preparation)

(demonstration of application of ionic liqs. in enzymic oxidation of methanol to formaldehyde)

IT	2471-06-9P	2604-13-9P	2805-17-6P	3178-20-9P	4337-66-0P
	5988-51-2P	7487-79-8P	16530-72-6P	16830-40-3P	17618-31-4P
	17618-32-5P	17863-38-6P	18394-23-5P	20261-59-0P	20475-13-2P
	20748-72-5P	21829-52-7P	23251-72-1P	Diethanolamine acetate	
	23349-61-3P	25859-29-4P	26764-31-8P	28098-03-5P	28129-21-7P,
	Diethanolamine hydrobromide	29194-47-6P	29867-71-8P	29867-72-9P	
	29867-75-2P	29868-00-6P	29868-01-7P	29870-14-2P	29870-15-3P
	29870-18-6P	29870-19-7P	29870-25-5P	29870-26-6P	29870-27-7P
	29870-29-9P	30718-92-4P	30933-06-3P	31086-83-6P	31889-13-1P
	35423-90-6P	38491-11-1P	38739-74-1P	49753-18-6P	49753-20-0P
	51264-32-5P	51276-44-9P	53226-35-0P	53562-95-1P	53926-87-7P
	54300-24-2P	55756-39-3P	56409-18-8P	56669-87-5P	57117-29-0P
	58937-21-6P	59101-30-3P	59866-70-5P	60395-28-0P	62036-98-0P
	63517-71-5P	63517-72-6P	64601-03-2P	64601-04-3P	64601-14-5P
	67303-52-0P	67384-57-0P	68141-00-4P	68141-46-8P	68391-54-8P,
	Diethanolamine formate	68568-51-4P	68815-69-0P	68833-69-2P	
	68860-57-1P	68945-90-4P	69362-00-1P	69362-01-2P	75478-96-5P
	76788-90-4P	77534-69-1P	77534-73-7P	79266-74-3P	82801-62-5P
	84110-42-9P	84145-30-2P	84145-60-8P	84176-56-7P	86683-38-7P
	86683-39-8P	88331-27-5P	89855-93-6P	90000-02-5P	90434-46-1P
	93882-26-9P	93882-27-0P	93942-28-0P	93942-29-1P	95332-67-5P
	98005-86-8P	98837-33-3P	101901-23-9P	103079-19-2P	108067-35-2P
	109962-24-5P	111318-69-5P	116033-27-3P	117472-14-7P	126050-30-4P
	134227-25-1P	135691-53-1P	137360-57-7P	138036-64-3P	156814-01-6P
	164460-12-2P	181180-62-1P	205490-53-5P	205490-69-3P	209052-82-4P
	210040-56-5P	252280-99-2P	327156-58-1P	372169-26-1P	372169-30-7P
	392292-52-3P	815574-85-7P	857086-60-3P	857086-63-6P	866567-31-9P
	866567-31-9P	866567-35-3P	866567-36-4P	866567-37-5P	866567-38-6P
	866567-39-7P	866567-40-0P	866567-41-1P	866567-42-2P	866567-43-3P
	866567-44-4P	866567-45-5P	866567-46-6P	866567-47-7P	866567-48-8P
	866567-49-9P	866567-50-2P	866567-51-3P	866567-52-4P	866567-53-5P
	866567-54-6P	866567-55-7P	866567-56-8P	866567-57-9P	866567-58-0P
	866567-59-1P	866567-60-4P	866567-61-5P	866567-62-6P	866567-63-7P
	866567-65-9P	866567-67-1P	866567-69-3P	866567-70-6P	866567-71-7P
	866567-72-8P	866567-73-9P	866567-74-0P	866567-75-1P	866567-76-2P
	866567-77-3P	866567-78-4P	866567-79-5P	866567-80-8P	866567-81-9P
	866567-82-0P	866567-83-1P	866567-84-2P	866567-85-3P	866567-86-4P
	866567-87-5P	866567-88-6P	866567-89-7P	866567-90-0P	866567-91-1P
	866567-92-2P	866567-93-3P	866567-94-4P	866567-95-5P	866567-96-6P
	866567-97-7P	866567-98-8P	866567-99-9P	866568-00-5P	866568-01-6P
	866568-02-7P	866568-03-8P	866568-04-9P	866568-05-0P	866568-06-1P
	866568-07-2P	866568-08-3P	866568-09-4P	866568-10-7P	866568-11-8P
	866568-12-9P	866568-13-0P	866568-15-2P	866568-16-3P	866568-17-4P
	866568-18-5P	866568-19-6P	866568-20-9P	866568-21-0P	866568-22-1P
	866568-23-2P	866568-24-3P	866568-25-4P	866568-26-5P	866568-27-6P
	866568-28-7P	866568-29-8P	866568-30-1P	866568-31-2P	866568-32-3P
	866568-33-4P	866568-34-5P	866568-35-6P	866568-36-7P	866568-37-8P
	866568-38-9P	866568-39-0P	866568-40-3P	866568-41-4P	866568-42-5P
	866568-43-6P				

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(preparation and methods for manufacture of ionic liqs. containing protonated

	primary, secondary or tertiary ammonium ions)				
IT	866568-44-7P	866568-45-8P	866568-46-9P	866568-47-0P	866568-48-1P
	866568-49-2P	866568-50-5P	866568-51-6P	866568-52-7P	866568-53-8P
	866568-54-9P	866568-55-2P	866568-59-4P	866568-60-7P	866568-63-0P
	866568-64-1P	866568-65-2P	866568-66-3P	866568-67-4P	866568-68-5P
	866568-69-6P	866568-70-9P	866568-71-0P	866568-72-1P	866568-74-3P
	866568-75-4P	866568-76-5P	866568-78-7P	866568-79-8P	866568-80-1P
	866568-81-2P	866568-82-3P	866568-83-4P	866568-84-5P	866568-85-6P
	866568-86-7P	866568-87-8P	866568-88-9P	866568-89-0P	866568-90-3P
	866568-91-4P	866568-92-5P	866568-94-7P	866568-96-9P	866568-98-1P
	866569-00-8P	866569-01-9P	866569-02-0P	866569-03-1P	866569-04-2P
	866569-05-3P	866569-06-4P	866569-07-5P	866569-08-6P	866569-09-7P
	866569-10-0P	866569-11-1P	866569-12-2P	866569-13-3P	866569-14-4P
	866569-15-5P	866569-16-6P	866569-17-7P	866569-18-8P	866569-19-9P
	866569-20-2P	866569-21-3P	866569-22-4P	866569-23-5P	866569-24-6P
	866569-25-7P	866569-26-8P	866569-27-9P	866569-28-0P	866569-29-1P
	866569-30-4P	866569-31-5P	866569-32-6P	866569-33-7P	866569-34-8P
	866569-35-9P	866569-36-0P	866569-37-1P	866569-38-2P	866569-39-3P
	866569-40-6P	866569-41-7P	866569-42-8P	866569-43-9P	866569-44-0P
	866569-45-1P	866569-46-2P	866569-47-3P	866569-48-4P	866569-49-5P
	866569-50-8P	866569-51-9P	866569-52-0P	866569-53-1P	866569-54-2P
	866569-55-3P	866569-56-4P	866569-57-5P	866569-58-6P	866569-59-7P
	866569-60-0P	866569-61-1P	866569-62-2P	866569-63-3P	866569-64-4P
	866569-65-5P	866569-66-6P	866569-68-8P	866569-69-9P	866569-70-2P
	866569-71-3P	866569-72-4P	866569-73-5P	866569-74-6P	866569-75-7P
	866569-76-8P	866569-77-9P	866569-78-0P	866569-79-1P	866569-80-4P
	866569-81-5P	866569-82-6P	866569-83-7P	866569-84-8P	866569-85-9P
	866569-86-0P	866569-87-1P	866569-88-2P	866569-89-3P	866569-90-6P
	866569-91-7P	866569-92-8P	866569-93-9P	866569-94-0P	866569-95-1P
	866569-96-2P	866569-97-3P	866569-98-4P	866569-99-5P	866570-00-5P
	866570-01-6P	866570-02-7P	866570-03-8P	866570-04-9P	866570-05-0P
	866570-06-1P	866570-07-2P	866570-08-3P	866570-09-4P	866570-10-7P
	866570-11-8P	866570-12-9P	866570-13-0P	866570-14-1P	866570-15-2P
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	866570-36-7P	866570-37-8P	866570-38-9P	866570-39-0P	866570-40-3P
	866570-41-4P	866570-42-5P	866570-43-6P	866570-44-7P	866570-45-8P
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	866570-61-8P	866570-62-9P	866570-63-0P	866570-64-1P	866570-65-2P
	866570-66-3P	866570-67-4P	866570-68-5P	866570-69-6P	866570-70-9P
	866570-71-0P	866570-72-1P	866570-73-2P	866570-74-3P	866570-75-4P
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	866570-81-2P	866570-82-3P	866570-83-4P	866570-84-5P	866570-85-6P
	866570-86-7P	866570-88-9P	866570-90-3P	866570-92-5P	866570-95-8P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN
 (Synthetic preparation); PREP (Preparation); USES (Uses)
 (preparation and methods for manufacture of ionic liqs. containing
 protonated

	primary, secondary or tertiary ammonium ions)				
IT	866570-97-0P	866570-99-2P	866571-01-9P	866571-03-1P	866571-04-2P
	866571-05-3P	866571-06-4P	866571-07-5P	866571-08-6P	866571-09-7P
	866571-10-0P	866571-11-1P	866571-12-2P	866571-13-3P	866571-14-4P
	866571-15-5P	866571-16-6P	866571-17-7P	866571-18-8P	866571-19-9P
	866571-20-2P	866571-21-3P	866571-22-4P	866571-23-5P	866571-24-6P
	866571-25-7P	866571-26-8P	866571-27-9P	866571-28-0P	866571-29-1P
	866571-30-4P	866571-31-5P	866571-32-6P	866571-33-7P	866571-34-8P
	866571-35-9P	866571-36-0P	866571-37-1P	866571-38-2P	866571-39-3P
	866571-40-6P	866571-41-7P	866571-42-8P	866571-43-9P	866571-44-0P

866571-45-1P 866571-46-2P 866571-47-3P 866571-48-4P 866571-49-5P
 866571-50-8P 866571-51-9P 866571-52-0P 866571-53-1P 866571-54-2P
 866571-55-3P 866571-56-4P 866571-57-5P 866571-58-6P 866571-59-7P
 866571-60-0P 866571-61-1P 866571-62-2P 866571-63-3P 866571-64-4P
 866571-65-5P 866571-66-6P 866571-67-7P 866571-68-8P 866571-69-9P
 866571-70-2P 866571-71-3P 866571-72-4P 866571-73-5P 866571-74-6P
 866571-75-7P 866571-76-8P 866571-77-9P 866571-78-0P 866571-79-1P
 866571-80-4P 866571-81-5P 866571-82-6P 866622-51-7P 866622-67-5P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN
 (Synthetic preparation); PREP (Preparation); USES (Uses)
 (preparation and methods for manufacture of ionic liqs. containing

protonated

primary, secondary or tertiary ammonium ions)

IT 79-14-1, Glycolic acid, reactions 102-79-4, N-Butyldiethanolamine
 108-01-0, N,N-Dimethylethanolamine 82113-65-3

RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation and methods for manufacture of ionic liqs. containing
 protonated

primary, secondary or tertiary ammonium ions)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
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	ENTRY	SESSION
FULL ESTIMATED COST	27.86	38.36
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-2.46	-2.46

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FILE COVERS 1907 - 19 Mar 2009 VOL 150 ISS 12
 FILE LAST UPDATED: 18 Mar 2009 (20090318/ED)

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COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.50	38.86
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
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=> s 59101-30-3/rn or 53518-18-6/rn
      1 59101-30-3/RN
      1 53518-18-6/RN
L4      2 59101-30-3/RN OR 53518-18-6/RN
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=> d 1 2
```

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L4 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2009 ACS on STN
RN 59101-30-3 REGISTRY
ED Entered STN: 16 Nov 1984
CN Formic acid, compd. with 2-(dimethylamino)ethanol (1:1) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Ethanol, 2-(dimethylamino)-, formate (salt) (9CI)
OTHER NAMES:
CN 2-(Dimethylamino)ethanol formate (salt)
CN Dimethylethanolamine formate
MF C4 H11 N O . C H2 O2
LC STN Files: CA, CAPLUS, CHEMLIST, TOXCENTER, USPATFULL
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)
```

CRN 108-01-0
CMF C4 H11 N O

Me₂N-CH₂-CH₂-OH

CM 2

CRN 64-18-6
CMF C H2 O2

O=CH-OH

6 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2009 ACS on STN
RN 53518-18-6 REGISTRY
ED Entered STN: 16 Nov 1984
CN 1H,5H,11H-[1]Benzopyrano[6,7,8-ij]quinolizin-11-one,
2,3,6,7-tetrahydro-9-(trifluoromethyl)- (CA INDEX NAME)

OTHER NAMES:

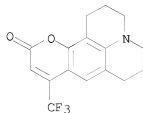
CN C 153
CN C 6F
CN Coumarin 153
CN Coumarin 495
CN Coumarin 540A
CN Coumarin 6F
CN K 153
CN NSC 338964
CN Pilot 495
DR 59977-81-0
MF C16 H14 F3 N O2
CI COM

LC STN Files: BEILSTEIN*, BIOSIS, CA, CAPLUS, CASREACT, CHEMCATS, CHEMLIST,
CSCHEM, DDFU, DRUGU, IFICDB, IFIPAT, IFIUDB, MSDS-OHS, TOXCENTER,
USPAT2, USPATFULL

(*File contains numerically searchable property data)

Other Sources: EINECS**, NDSL**, TSCA**

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PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
569 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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FULL ESTIMATED COST	5.06	43.92
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
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FILE COVERS 1907 - 19 Mar 2009 VOL 150 ISS 12
FILE LAST UPDATED: 18 Mar 2009 (20090318/ED)

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=> s 59101-30-3

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

L6 6 L5

=> d 1-6 all

L6 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2008:165841 CAPLUS

DN 148:238708
 ED Entered STN: 10 Feb 2008
 TI Solvent and Rotational Relaxation of Coumarin 153 in a Protic Ionic Liquid Dimethylethanolammonium Formate
 AU Seth, Debabrata; Sarkar, Souravi; Sarkar, Nilmoni
 CS Department of Chemistry, Indian Institute of Technology, Kharagpur, 721 302, India
 SO Journal of Physical Chemistry B (2008), 112(9), 2629-2636
 CODEN: JPCBFK; ISSN: 1520-6106
 PB American Chemical Society
 DT Journal
 LA English
 CC 22-9 (Physical Organic Chemistry)
 AB The solvent relaxation and orientational dynamics of coumarin 153 (C-153) was investigated in N,N-dimethylethanolammonium formate (DAF) with a variation of temperature. DAF is a protic room-temperature ionic liquid, comprised of nonarom. cations. Both solvent relaxation and orientational dynamics of C-153 in DAF are linearly well-correlated with the bulk viscosity at different temps. We optimized the geometry of DAF using quantum chemical calcns. using d. functional theory methods. The optimized structure of DAF shows a nonbonded interaction between cation and anion, which suggests that a hydrogen bond is formed between hydrogen atoms attached to the nitrogen atom of the cation with the oxygen atom of the anion in DAF.
 ST solvent rotational relaxation coumarin protic ionic liq dimethylethanolammonium formate
 IT Molecular structure
 (optimized; solvent and rotational relaxation of coumarin 153 in protic ionic liquid dimethylethanolammonium formate)
 IT Fluorescence
 Hydrogen bond
 Ionic liquids
 Molecular orientation
 Molecular rotation
 Solvation
 (solvent and rotational relaxation of coumarin 153 in protic ionic liquid dimethylethanolammonium formate)
 IT 59101-30-3
 RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
 (solvent and rotational relaxation of coumarin 153 in protic ionic liquid dimethylethanolammonium formate)
 IT 53518-18-6, Coumarin 153
 RL: PRP (Properties)
 (solvent and rotational relaxation of coumarin 153 in protic ionic liquid dimethylethanolammonium formate)
 RE.CNT 105 THERE ARE 105 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L6 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:558280 CAPLUS

DN 145:64579

ED Entered STN: 15 Jun 2006

TI Additive and vehicle for aqueous inks, paints, coatings and adhesives

IN Skov, Richard T.; Cook, Leroy John

PA Omnitech Environmental, LLC, USA

SO PCT Int. Appl., 55 pp.

CODEN: PIXXD2

DT Patent

LA English

CC 42-10 (Coatings, Inks, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006063266	A2	20060615	WO 2005-US44693	20051209
	WO 2006063266	A8	20060803		
	WO 2006063266	A3	20061026		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VZ, VN, YU, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	US 20060128831	A1	20060615	US 2004-9577	20041210
PRAI	US 2004-9577	A	20041210		

CLASS	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	WO 2006063266	IPCI	C09D0133-00 [I,A]; C09D0133-00 [I,C]; C09D0133-00 [I,A]; C09D0133-00 [I,C]; C09D0133-00 [I,A]
		IPCR	C09D0133-00 [I,C]; C09D0133-00 [I,A]
		ECLA	C09J133/04
	US 20060128831	IPCI	C03C0017-00 [I,A]; C09D0011-00 [I,A]
		NCL	523/160.000; 523/161.000
		ECLA	C09J133/04
AB	Additives for improving the film formation of inks, paints, coatings, and adhesives are based on photocurable products of carboxylic acids or anhydrides with N-alkylalkanolamines or dialkylaminoalkyl (meth)acrylates. A typical additive was manufactured by slowly adding 1.75 lbs dimethylaminoethyl methacrylate to 2.5 lbs water containing 1 lb 4,4'-carbonylbis(1,2-benzenedicarboxylic acid).		
ST	film promoter photocurable carboxylate dialkylaminoalkyl methacrylate ink paint adhesive; carbonylbisphthalic acid dimethylaminoethyl methacrylate salt manuf		
IT	Paints (latex; photocurable carboxylic acid salts of amines as additives for improving film formation of inks, paints, coatings and adhesives)		
IT	Inks (oil-based; photocurable carboxylic acid salts of amines as additives for improving film formation of inks, paints, coatings and adhesives)		
IT	Quaternary ammonium compounds, uses RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (photocurable carboxylic acid salts of amines as additives for improving film formation of inks, paints, coatings and adhesives)		
IT	Acrylic polymers, uses Polyurethanes, uses RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses) (photocurable carboxylic acid salts of amines as additives for improving film formation of inks, paints, coatings and adhesives)		
IT	Carboxylic acids, uses RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (salts; photocurable carboxylic acid salts of amines as additives for improving film formation of inks, paints, coatings and adhesives)		
IT	Corn oil Cottonseed oil Linseed oil Olive oil Palm kernel oil Palm oil Peanut oil Soybean oil Tall oil Tung oil RL: TEM (Technical or engineered material use); USES (Uses) (vehicle; photocurable carboxylic acid salts of amines as additives for improving film formation of inks, paints, coatings and adhesives)		
IT	Adhesives Coating materials Inks (water-thinned; photocurable carboxylic acid salts of amines as additives for improving film formation of inks, paints, coatings and adhesives)		
IT	890650-25-6, PS 68 RL: POF (Polymer in formulation); TEM (Technical or engineered material		

use); USES (Uses)
(adhesive; photocurable carboxylic acid salts of amines as additives
for improving film formation of inks, paints, coatings and adhesives)

IT 890309-29-2P 890650-27-8P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(cured coating; photocurable carboxylic acid salts of amines as
additives for improving film formation of inks, paints, coatings and
adhesives)

IT 50-21-5DP, Lactic acid, salts with amines 50-78-2DP, Acetylsalicylic
acid, salts with amines 57-10-3DP, Palmitic acid, salts with amines
57-11-4DP, Stearic acid, salts with amines 64-18-6DP, Formic acid, salts
with amines 64-19-7DP, Acetic acid, salts with amines 65-85-0DP,
Benzoic acid, salts with amines 77-92-9DP, Citric acid, salts with
amines 79-09-4DP, Propionic acid, salts with amines 79-10-7DP, Acrylic
acid, salts with amines 79-11-8DP, Chloroacetic acid, salts with amines
79-14-1DP, Glycolic acid, salts with amines 79-41-4DP, Methacrylic acid,
salts with amines 85-52-9DP, o-Benzoylbenzoic acid, salts with amines
87-69-4DP, Tartaric acid, salts with amines 88-99-3DP, Phthalic acid,
salts with amines 97-65-4DP, Itaconic acid, salts with amines
99-50-3DP, Protocatechuic acid, salts with amines 100-21-0DP,
Terephthalic acid, salts with amines 100-37-8DP,
N,N-Diethylethanolamine, salts with carboxylic acids 105-16-8DP,
N,N-Diethylaminoethyl methacrylate, salts with carboxylic acids
105-59-9DP, N-Methyldiethanolamine, salts with carboxylic acids
108-01-0DP, N,N-Dimethylethanolamine, salts with carboxylic acids
108-30-5DP, Succinic anhydride, salts with amines 108-31-6DP, Maleic
anhydride, salts with amines 108-55-4DP, Glutaric anhydride, salts with
amines 109-83-1DP, N-Methylethanolamine, salts with carboxylic acids
110-15-6DP, Succinic acid, salts with amines 110-16-7DP, Maleic acid,
salts with amines 110-17-8DP, Fumaric acid, salts with amines
111-20-6DP, Sebacic acid, salts with amines 112-80-1DP, Oleic acid,
salts with amines 121-91-5DP, Isophthalic acid, salts with amines
124-04-9DP, Adipic acid, salts with amines 141-22-0DP, Ricinoleic acid,
salts with amines 141-82-2DP, Malonic acid, salts with amines
144-62-7DP, Oxalic acid, salts with amines 485-38-1DP,
4,5-Dimethoxyisophthalic acid, salts with amines 514-10-3DP, Abietic
acid, salts with amines 526-95-4DP, D-Gluconic acid, salts with amines
1585-40-6DP, Benzenepentacarboxylic acid, salts with amines 2421-28-5DP,
Benzophenonetetracarboxylic acid dianhydride, salts with amines
2426-54-2DP, N,N-Diethylaminoethyl acrylate, salts with carboxylic acids
2439-35-2DP, salts with carboxylic acids 2479-49-4DP,
3,3',4,4'-Benzophenonetetracarboxylic acid, salts with amines
2867-47-2DP, N,N-Dimethylaminoethyl methacrylate, salts with carboxylic
acids 2893-43-8DP, N-Ethyl-N-methylethanolamine, salts with carboxylic
acids 5570-18-3DP, 2-Aminobenzeneboronic acid, salts with amines
6660-65-7DP, 4,6-Dichloroisophthalic acid, salts with amines
6939-93-1DP, 4-Bromoisophthalic acid, salts with amines 13049-16-6DP,
salts with amines 21161-11-5DP, 2-Nitroisophthalic acid, salts with
amines 30755-77-2DP, Benzophenonedicarboxylic acid, salts with amines
39622-79-2DP, 2-Aminoisophthalic acid, salts with amines 52125-39-0DP,
salts with carboxylic acids 59101-30-3P 60047-46-3DP, salts
with amines 116631-90-4DP, salts with amines 255731-44-3DP, salts with
carboxylic acids 890309-27-0P 890309-28-1P 890639-88-0DP, salts with
carboxylic acids 890639-92-6DP, salts with carboxylic acids
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(photocurable carboxylic acid salts of amines as additives for
improving film formation of inks, paints, coatings and adhesives)

IT 200359-24-6, Carboset GA 1931 223784-68-7, Maincote HG 54D
890650-05-2, Filtrez 5014
RL: POF (Polymer in formulation); TEM (Technical or engineered material

use); USES (Uses)

(photocurable carboxylic acid salts of amines as additives for
improving film formation of inks, paints, coatings and adhesives)

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Anon; WO 2004044067 A1 CAPLUS

L6 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2005:1090138 CAPLUS

DN 143:386681

ED Entered STN: 12 Oct 2005

TI Ionic liquids containing protonated primary, secondary or tertiary
ammonium ions

IN Walker, Adam John

PA The University of York, UK

SO Brit. UK Pat. Appl., 62 pp.

CODEN: BAXXDU

DT Patent

LA English

IC ICM C07C215-08

ICS C07C215-12; C07C217-30

CC 23-4 (Aliphatic Compounds)

Section cross-reference(s): 45

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2412912	A	20051012	GB 2005-6984	20050407
	GB 2412912	B	20070711		
	AU 2005232025	A1	20051020	AU 2005-232025	20050407
	CA 2563458	A1	20051020	CA 2005-2563458	20050407
	WO 2005097731	A2	20051020	WO 2005-GB1364	20050407
	WO 2005097731	A3	20051124		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	CN 1997620	A	20070711	CN 2005-80018219	20050407
	EP 1805131	A2	20070711	EP 2005-735988	20050407
	R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR			
	JP 2007532525	T	20071115	JP 2007-506841	20050407
	MX 2006011531	A	20070326	MX 2006-11531	20061005
	IN 2006KN03208	A	20070608	IN 2006-KN3208	20061103
	KR 2007031302	A	20070319	KR 2006-723342	20061107
	US 20070185330	A1	20070809	US 2007-599694	20070119
PRAI	GB 2004-7908	A	20040407		
	WO 2005-GB1364	W	20050407		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
GB 2412912	ICM	C07C215-08
	ICS	C07C215-12; C07C217-30
	IPCI	C07C0215-00 [I,C]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C]; C07C0217-30 [I,A]

	IPCR	C07C0215-00 [I,C]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0215-40 [I,A]; C07C0217-00 [I,C]; C07C0217-30 [I,A]
AU 2005232025	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]
	IPCR	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
CA 2563458	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	B01J0031-02 [I,A]; B01J0031-04 [I,A]; C07C0215-40 [I,A]; C07C0215-00 [I,C*]
	IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; B01J0031-02 [I,C]; B01J0031-02 [I,A]; B01J0031-04 [I,C]; B01J0031-04 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
WO 2005097731	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-00 [ICM,7]; C07C0215-40 [ICS,7]; B01J0031-04 [ICS,7]; B01J0031-02 [ICS,7]
	IPCR	C07C0215-00 [I,C*]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0215-40 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
CN 1997620	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-40 [I,A]; C07C0215-00 [I,C*]; B01J0031-04 [I,A]; B01J0031-02 [I,A]
	IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
EP 1805131	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-40 [I,A]; C07C0215-00 [I,C*]
	IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
JP 2007532525	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-40 [I,A]; C07C0215-00 [I,C*]; C07C0311-03 [I,A]; C07C0311-00 [I,C*]
	IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]; C07C0311-00 [I,C]; C07C0311-03 [I,A]
MX 2006011531	FTERM	4H006/AA01; 4H006/AA03; 4H006/AB80
	IPCI	B01J0031-02 [I,C*]; B01J0031-04 [I,C*]; C07C0215-40 [I,A]; C07C0215-00 [I,C*]
IN 2006KN03208	IPCI	C07C0215-40 [ICM,7]; C07C0215-00 [ICS,7]
KR 2007031302	IPCI	C07C0215-40 [I,A]; C07C0215-00 [I,A]
US 20070185330	IPCI	C07C0215-02 [I,A]; C07C0215-00 [I,C*]; C07D0211-02 [I,A]; C07D0211-00 [I,C*]
OS	NCL	546/184.000; 564/281.000

AB MARPAT 143:386681

The present invention relates to ionic liqs. comprising an anion and a cation wherein the cation is a primary, secondary or tertiary ammonium ion containing a protonated nitrogen atom. The invention also provides processes for the manufacture of ionic liqs. For example, N,N-dimethylethanolammonium glycolate (I) was prepared by gradually adding glycolic acid to an alc. solution of N,N-dimethylethanolamine; after completion and neutralization, the cold alc. solution was filtered, solvent removed, then frozen in liquid nitrogen and lyophilized in vacuo. After gradually allowing the sample to warm to room temperature, 32.85 g (99% yield) of I as a pale yellow liquid was isolated. Preferred ionic liqs. contain ethanolammonium, diethanolammonium, N-butyl-diethanolammonium, N,N-dimethylethanolammonium, N-methylethanolammonium, N,N-di(methoxyethyl)ammonium and 1-(3-hydroxypropyl)putrescine ions as cations.

ST amine acid; ammonium ionic liq prep; primary ammonium ion prep; ionic liq; secondary ammonium ion prep; ionic liq; tertiary ammonium ion prep

ionic liq
IT Oxidation
 (enzymic; demonstration of application of ionic liqs. in enzymic oxidation
 of methanol to formaldehyde)
IT Green chemistry
 Ionic liquids
 (preparation and methods for manufacture of ionic liqs. containing
protonated
 primary, secondary or tertiary ammonium ions)
IT Quaternary ammonium compounds, preparation
 RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN
 (Synthetic preparation); PREP (Preparation); USES (Uses)
 (preparation and methods for manufacture of ionic liqs. containing
protonated
 primary, secondary or tertiary ammonium ions)
IT Acids, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation and methods for manufacture of ionic liqs. containing
protonated
 primary, secondary or tertiary ammonium ions)
IT Solvents
 (preparation and methods for manufacture of ionic liqs. containing
protonated
 primary, secondary or tertiary ammonium ions for use as solvent in
 industrial and com. applications)
IT Amines, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (primary; preparation and methods for manufacture of ionic liqs. containing
 protonated primary, secondary or tertiary ammonium ions)
IT Carboxylic acids, uses
 Sulfonic acids, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (salts, anion component for ionic liquid; preparation and methods for
manufacture
 of ionic liqs. containing protonated primary, secondary or tertiary
 ammonium ions)
IT Amines, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (secondary; preparation and methods for manufacture of ionic liqs.
containing
 protonated primary, secondary or tertiary ammonium ions)
IT Amines, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (tertiary; preparation and methods for manufacture of ionic liqs. containing
 protonated primary, secondary or tertiary ammonium ions)
IT 56-14-4, Succinate, uses 57-60-3, Pyruvate, uses 63-36-5, Salicylate,
 uses 71-47-6, Formate, uses 71-50-1, Acetate, uses 71-52-3, Hydrogen
 carbonate, uses 72-03-7, Propanoate, uses 74-81-7, Octanoate, uses
 113-21-3, Lactate, uses 126-44-3, Citrate, uses 142-42-7, Fumarate,
 uses 149-61-1, Malate 150-43-6, uses 151-33-7, Hexanoate, uses
 338-70-5, uses 461-55-2, Butanoate, uses 666-14-8, uses 766-76-7,
 Benzoate, uses 769-61-9, Mandelate 3342-79-8, Nonanoate 3398-75-2,
 Decanoate 3715-17-1, Tartrate, uses 3812-32-6, Carbonate, uses
 7563-37-3, Heptanoate 7631-42-7, Phenylacetate, uses 10023-74-2,
 Pentanoate, uses 12627-13-3, Silicate 14066-19-4, Hydrogen phosphate,
 uses 14066-20-7, Dihydrogen phosphate, uses 14265-44-2, Phosphate,
 uses 14477-72-6, Trifluoroacetate ion, uses 14797-55-8, Nitrate, uses
 14808-79-8, Sulphate, uses 14874-70-5, Tetrafluoroborate 14996-02-2,
 Hydrogen sulfate, uses 16053-58-0, Methanesulfonate anion 16887-00-6,
 Chloride, uses 16919-18-9, Hexafluorophosphate 17121-12-9,
 Metaphosphate (P4O124-) 20461-54-5, Iodide, uses 20938-62-9,
 Pantothenate 24959-67-9, Bromide, uses 37181-39-8,

Trifluoromethanesulfonate 41824-21-9, Crotonate 44864-55-3
 45048-62-2 49681-69-8, Hydrogen tartrate, uses 59561-61-4 86848-98-8
 86848-99-9 97901-86-5 98837-98-0 130434-58-1 328238-56-8
 866621-22-9

RL: NUU (Other use, unclassified); USES (Uses)

(anion component for ionic liquid; preparation and methods for manufacture

of ionic

liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 176158-74-0P

RL: BSU (Biological study, unclassified); IMF (Industrial manufacture);

NUU (Other use, unclassified); PRP (Properties); SPN (Synthetic

preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(biodegradn. anal. of ionic liquid; preparation and methods for manufacture

of ionic

liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 20740-76-5 22852-66-0, Ethanolamine conjugate acid 26265-71-4

36833-63-3 36833-64-4 65591-62-0 90578-97-5 866567-32-0

866567-33-1 866567-34-2

RL: NUU (Other use, unclassified); USES (Uses)

(cation component for ionic liquid; preparation and methods for manufacture

of

ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 67-56-1, Methanol, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(demonstration of application of ionic liqs. in enzymic oxidation of methanol to formaldehyde)

IT 50-00-0P, Formaldehyde, preparation

RL: SPN (Synthetic preparation); PREP (Preparation)

(demonstration of application of ionic liqs. in enzymic oxidation of methanol to formaldehyde)

IT 2471-06-9P 2604-13-9P 2805-17-6P 3178-20-9P 4337-66-0P

5988-51-2P 7487-79-8P 16530-72-6P 16830-40-3P 17618-31-4P

17618-32-5P 17863-38-6P 18394-23-5P 20261-59-0P 20475-13-2P

20748-72-5P 21829-52-7P 23251-72-1P, Diethanolamine acetate

23349-61-3P 25859-29-4P 26764-31-8P 28098-03-5P 28129-21-7P,

Diethanolamine hydrobromide 29194-47-6P 29867-71-8P 29867-72-9P

29867-75-2P 29868-00-6P 29868-01-7P 29870-14-2P 29870-15-3P

29870-18-6P 29870-19-7P 29870-25-5P 29870-26-6P 29870-27-7P

29870-29-9P 30718-92-4P 30933-06-3P 31086-83-6P 31889-13-1P

35423-90-6P 38491-11-1P 38739-74-1P 49753-18-6P 49753-20-0P

51264-32-5P 51276-44-9P 53226-35-0P 53562-95-1P 53926-87-7P

54300-24-2P 55756-39-3P 56409-18-8P 56669-87-5P 57117-29-0P

58937-21-6P 59101-30-3P 59866-70-5P 60395-28-0P

62036-98-0P 63517-71-5P 63517-72-6P 64601-03-2P 64601-04-3P

64601-14-5P 67303-52-0P 67384-57-0P 68141-00-4P 68141-46-8P

68391-54-8P, Diethanolamine formate 68568-51-4P 68815-69-0P

68833-69-2P 68860-57-1P 68945-90-4P 69362-00-1P 69362-01-2P

75478-96-5P 76788-90-4P 77534-69-1P 77534-73-7P 79266-74-3P

82801-62-5P 84110-42-9P 84145-30-2P 84145-60-8P 84176-56-7P

86683-38-7P 86683-39-8P 88331-27-5P 89855-93-6P 90000-02-5P

90434-46-1P 93882-26-9P 93882-27-0P 93942-28-0P 93942-29-1P

95332-67-5P 98005-86-8P 98837-33-3P 101901-23-9P 103079-19-2P

108067-35-2P 109962-24-5P 111318-69-5P 116033-27-3P 117472-14-7P

126050-30-4P 134227-25-1P 135691-53-1P 137360-57-7P 138036-64-3P

156814-01-6P 164460-12-2P 181180-62-1P 205490-53-5P 205490-69-3P

209052-82-4P 210040-56-5P 252280-99-2P 327156-58-1P 372169-26-1P

372169-30-7P 392292-52-3P 815574-85-7P 857086-60-3P 857086-63-6P

866567-31-9P 866567-31-9P 866567-35-3P 866567-36-4P 866567-37-5P

866567-38-6P 866567-39-7P 866567-40-0P 866567-41-1P 866567-42-2P

866567-43-3P 866567-44-4P 866567-45-5P 866567-46-6P 866567-47-7P

866567-48-8P 866567-49-9P 866567-50-2P 866567-51-3P 866567-52-4P

866567-53-5P	866567-54-6P	866567-55-7P	866567-56-8P	866567-57-9P
866567-58-0P	866567-59-1P	866567-60-4P	866567-61-5P	866567-62-6P
866567-63-7P	866567-65-9P	866567-67-1P	866567-69-3P	866567-70-6P
866567-71-7P	866567-72-8P	866567-73-9P	866567-74-0P	866567-75-1P
866567-76-2P	866567-77-3P	866567-78-4P	866567-79-5P	866567-80-8P
866567-81-9P	866567-82-0P	866567-83-1P	866567-84-2P	866567-85-3P
866567-86-4P	866567-87-5P	866567-88-6P	866567-89-7P	866567-90-0P
866567-91-1P	866567-92-2P	866567-93-3P	866567-94-4P	866567-95-5P
866567-96-6P	866567-97-7P	866567-98-8P	866567-99-9P	866568-00-5P
866568-01-6P	866568-02-7P	866568-03-8P	866568-04-9P	866568-05-0P
866568-06-1P	866568-07-2P	866568-08-3P	866568-09-4P	866568-10-7P
866568-11-8P	866568-12-9P	866568-13-0P	866568-15-2P	866568-16-3P
866568-17-4P	866568-18-5P	866568-19-6P	866568-20-9P	866568-21-0P
866568-22-1P	866568-23-2P	866568-24-3P	866568-25-4P	866568-26-5P
866568-27-6P	866568-28-7P	866568-29-8P	866568-30-1P	866568-31-2P
866568-32-3P	866568-33-4P	866568-34-5P	866568-35-6P	866568-36-7P
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866568-42-5P	866568-43-6P			

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN

(Synthetic preparation); PREP (Preparation); USES (Uses)

(preparation and methods for manufacture of ionic liqs. containing

protonated

primary, secondary or tertiary ammonium ions)

IT	866568-44-7P	866568-45-8P	866568-46-9P	866568-47-0P	866568-48-1P
	866568-49-2P	866568-50-5P	866568-51-6P	866568-52-7P	866568-53-8P
	866568-54-9P	866568-57-2P	866568-59-4P	866568-60-7P	866568-63-0P
	866568-64-1P	866568-65-2P	866568-66-3P	866568-67-4P	866568-68-5P
	866568-69-6P	866568-70-9P	866568-71-0P	866568-72-1P	866568-74-3P
	866568-75-4P	866568-76-5P	866568-78-7P	866568-79-8P	866568-80-1P
	866568-81-2P	866568-82-3P	866568-83-4P	866568-84-5P	866568-85-6P
	866568-86-7P	866568-87-8P	866568-88-9P	866568-89-0P	866568-90-3P
	866568-91-4P	866568-92-5P	866568-94-7P	866568-96-9P	866568-98-1P
	866569-00-8P	866569-01-9P	866569-02-0P	866569-03-1P	866569-04-2P
	866569-05-3P	866569-06-4P	866569-07-5P	866569-08-6P	866569-09-7P
	866569-10-0P	866569-11-1P	866569-12-2P	866569-13-3P	866569-14-4P
	866569-15-5P	866569-16-6P	866569-17-7P	866569-18-8P	866569-19-9P
	866569-20-2P	866569-21-3P	866569-22-4P	866569-23-5P	866569-24-6P
	866569-25-7P	866569-26-8P	866569-27-9P	866569-28-0P	866569-29-1P
	866569-30-4P	866569-31-5P	866569-32-6P	866569-33-7P	866569-34-8P
	866569-35-9P	866569-36-0P	866569-37-1P	866569-38-2P	866569-39-3P
	866569-40-6P	866569-41-7P	866569-42-8P	866569-43-9P	866569-44-0P
	866569-45-1P	866569-46-2P	866569-47-3P	866569-48-4P	866569-49-5P
	866569-50-8P	866569-51-9P	866569-52-0P	866569-53-1P	866569-54-2P
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	866570-01-6P	866570-02-7P	866570-03-8P	866570-04-9P	866570-05-0P
	866570-06-1P	866570-07-2P	866570-08-3P	866570-09-4P	866570-10-7P
	866570-11-8P	866570-12-9P	866570-13-0P	866570-14-1P	866570-15-2P
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	866570-26-5P	866570-27-6P	866570-28-7P	866570-29-8P	866570-30-1P
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 866570-71-0P 866570-72-1P 866570-73-2P 866570-74-3P 866570-75-4P
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 866570-81-2P 866570-82-3P 866570-83-4P 866570-84-5P 866570-85-6P
 866570-86-7P 866570-88-9P 866570-90-3P 866570-92-5P 866570-95-8P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN
 (Synthetic preparation); PREP (Preparation); USES (Uses)
 (preparation and methods for manufacture of ionic liqs. containing

protonated

primary, secondary or tertiary ammonium ions)

IT 866570-97-0P 866570-99-2P 866571-01-9P 866571-03-1P 866571-04-2P
 866571-05-3P 866571-06-4P 866571-07-5P 866571-08-6P 866571-09-7P
 866571-10-0P 866571-11-1P 866571-12-2P 866571-13-3P 866571-14-4P
 866571-15-5P 866571-16-6P 866571-17-7P 866571-18-8P 866571-19-9P
 866571-20-2P 866571-21-3P 866571-22-4P 866571-23-5P 866571-24-6P
 866571-25-7P 866571-26-8P 866571-27-9P 866571-28-0P 866571-29-1P
 866571-30-4P 866571-31-5P 866571-32-6P 866571-33-7P 866571-34-8P
 866571-35-9P 866571-36-0P 866571-37-1P 866571-38-2P 866571-39-3P
 866571-40-6P 866571-41-7P 866571-42-8P 866571-43-9P 866571-44-0P
 866571-45-1P 866571-46-2P 866571-47-3P 866571-48-4P 866571-49-5P
 866571-50-8P 866571-51-9P 866571-52-0P 866571-53-1P 866571-54-2P
 866571-55-3P 866571-56-4P 866571-57-5P 866571-58-6P 866571-59-7P
 866571-60-0P 866571-61-1P 866571-62-2P 866571-63-3P 866571-64-4P
 866571-65-5P 866571-66-6P 866571-67-7P 866571-68-8P 866571-69-9P
 866571-70-2P 866571-71-3P 866571-72-4P 866571-73-5P 866571-74-6P
 866571-75-7P 866571-76-8P 866571-77-9P 866571-78-0P 866571-79-1P
 866571-80-4P 866571-81-5P 866571-82-6P 866571-83-7P 866571-84-8P
 866571-85-9P 866571-86-0P 866571-87-1P 866571-88-2P 866571-89-3P
 866571-90-4P 866571-91-5P 866571-92-6P 866571-93-7P 866571-94-8P
 866571-95-9P 866571-96-0P 866571-97-1P 866571-98-2P 866571-99-3P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN
 (Synthetic preparation); PREP (Preparation); USES (Uses)
 (preparation and methods for manufacture of ionic liqs. containing

protonated

primary, secondary or tertiary ammonium ions)

IT 79-14-1, Glycolic acid, reactions 102-79-4, N-Butyldiethanolamine
 108-01-0, N,N-Dimethylethanolamine 82113-65-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation and methods for manufacture of ionic liqs. containing

protonated

primary, secondary or tertiary ammonium ions)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Arizona State Univ; WO 2004114445 A1 CAPLUS
- (2) Armstrong, D; Anal Chem 2001, V73, P3679 CAPLUS
- (3) Basf; WO 2004090066 A1 CAPLUS
- (4) Solvent Innovation; WO 03074494 A1 CAPLUS
- (5) Staatliches Institut; DD 262042 A1 CAPLUS
- (6) Studiengesellschaft; WO 03060057 A1 CAPLUS
- (7) Williams, E; The J of Physical Chem 1977, V81(3) CAPLUS

L6 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1981:31600 CAPLUS

DN 94:31600

OREF 94:5217a,5220a

ED Entered STN: 12 May 1984

TI Stabilization of amine catalysts in a composition with halogenated polyols
 for polyurethane foam production

IN Fuzesi, Stephen

PA Olin Corp., USA

SO U.S., 6 pp. Cont.-in-part of U.S. Ser. No. 801,676, abandoned.

CODEN: USXXAM

DT Patent
 LA English
 IC C08G041-00
 INCL 521171000
 CC 36-6 (Plastics Manufacture and Processing)
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4219624	A	19800826	US 1978-962537	19781120
	GB 1586019	A	19810311	GB 1978-16548	19780426
	BR 7803348	A	19790116	BR 1978-3348	19780526
	JP 53149299	A	19781226	JP 1978-64854	19780530
	JP 61041928	B	19860918		
	FR 2393024	A1	19781229	FR 1978-16143	19780530
	FR 2393024	B1	19820625		
PRAI	US 1977-801676	A2	19770531		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4219624	IC	C08G041-00
	INCL	521171000
	IPCI	C08G0041-00 [ICM]
	IPCR	C08G0018-00 [I,C*]; C08G0018-18 [I,A]; C08G0018-50 [I,A]
	NCL	521/171.000; 252/181.000; 521/112.000; 521/114.000; 521/116.000; 521/131.000
	ECLA	C08G018/18R; C08G018/50C3
GB 1586019	IPCI	C08G0018-18 [ICM]; C08G0018-00 [ICM,C*]; C08G0018-14 [ICS]; C08L0071-00 [ICS]
	IPCR	C08G0018-00 [I,C*]; C08G0018-18 [I,A]; C08G0018-50 [I,A]; C08G0065-00 [I,C*]; C08G0065-26 [I,A]
BR 7803348	IPCI	C08G0018-18 [ICM]; C08G0018-40 [ICS]; C08G0018-00 [ICS,C*]
	IPCR	C08G0018-00 [I,A]; C08G0018-00 [I,C*]; C08G0018-18 [I,A]; C08G0018-30 [I,A]; C08G0018-32 [I,A]; C08G0018-50 [I,A]; C08G0065-00 [I,C*]; C08G0065-26 [I,A]
	ECLA	C08G018/18R; C08G018/50C3; C08G065/26C1
JP 53149299	IPCI	C08G0018-14 [ICM]; C08G0018-18 [ICA]; C08G0018-00 [ICA,C*]
	IPCR	C08G0018-00 [I,A]; C08G0018-00 [I,C*]; C08G0018-18 [I,A]; C08G0018-30 [I,A]; C08G0018-32 [I,A]; C08G0018-50 [I,A]; C08G0065-00 [I,C*]; C08G0065-26 [I,A]
FR 2393024	IPCI	C08L0071-00 [ICM]; C08G0018-14 [ICS]; C08K0005-17 [ICS]; C08K0005-00 [ICS,C*]
	IPCR	C08G0018-00 [I,A]; C08G0018-00 [I,C*]; C08G0018-18 [I,A]; C08G0018-30 [I,A]; C08G0018-32 [I,A]; C08G0018-50 [I,A]; C08G0065-00 [I,C*]; C08G0065-26 [I,A]

AB Storage-stable compns. for polyurethane foam manufacture contain a halogenated polyether polyol and .apprx.0.02-5% acid-blocked amine polyurethane foaming catalyst prepared by reacting a carboxylic acid with a tertiary amine at a molar ratio of .apprx.1-1.5:1. Thus, a series of amine-catalyzed, halogenated polyol compns., prepared by adding blocked, i.e., triethylenediamine diformate [40741-91-1], and unblocked, i.e., dimethylethanolamine, amine catalysts to a chlorinated polyether polyol (I) (OH number .apprx.365) prepared from 4,4,4-trichloro-1,2-epoxybutane and an equimolar ethylene glycol- α -D-glucose monohydrate mixture in the presence of BF₃ etherate, were tested for pH, Cl₂, and available N⁺ before and after aging for 90 h at 60°. The results indicated prereaction with the halogenated polyol was minimized by acid blocking the amine

catalyst to prevent deactivation and loss of catalyst reactivity in a foaming reaction.

ST chlorinated polyol storage stability; polyurethane foam catalyst stabilization; amine catalyst acid blocked

IT Polyoxymethylenes
RL: USES (Uses)
(acid-blocked amine catalysts for, storage-stable)

IT Polymerization catalysts
(amines, acid-blocked, for halogenated polyols for polyurethane foam manufacture)

IT Urethane polymers, preparation
RL: PREP (Preparation)
(cellular, chlorinated polyether polyols for manufacture of, acid-blocked storage-stable amine catalysts for)

IT 502-44-3D, chlorinated polyol derivs. 629-11-8D, chlorinated polyol derivs. 58450-04-7 76125-67-2
RL: USES (Uses)
(acid-blocked amine catalysts for, storage-stable)

IT 40741-91-1 59101-30-3 68459-80-3 75951-38-1 75951-39-2 75980-64-2
RL: CAT (Catalyst use); USES (Uses)
(catalysts, storage-stable halogenated polyols containing, for polyurethane foam manufacture)

IT 76199-08-1P
RL: PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
(cellular, manufacture of, chlorinated polyether polyols for, storage-stable acid-blocked amine catalysts for)

L6 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1979:138618 CAPLUS

DN 90:138618

OREF 90:22001a,22004a

ED Entered STN: 12 May 1984

TI Catalytically stable polyol mixture for manufacturing polyurethane foams

IN Fuzesi, Stephen

PA Olin Corp., USA

SO Ger. Offen., 23 pp.

CODEN: GWXXBX

DT Patent

LA German

IC C08G018-32

CC 36-6 (Plastics Manufacture and Processing)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2822819	A1	19781207	DE 1978-2822819	19780524
	GB 1586019	A	19810311	GB 1978-16548	19780426
	BR 7803348	A	19790116	BR 1978-3348	19780526
	JP 53149299	A	19781226	JP 1978-64854	19780530
	JP 61041928	B	19860918		
	FR 2393024	A1	19781229	FR 1978-16143	19780530
	FR 2393024	B1	19820625		
PRAI	US 1977-801676	A	19770531		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2822819	IC	C08G018-32
	IPCI	C08G0018-32 [ICM]; C08G0018-00 [ICM,C*]
	IPCR	C08G0018-00 [I,A]; C08G0018-00 [I,C*]; C08G0018-18 [I,A]; C08G0018-30 [I,A]; C08G0018-32 [I,A]; C08G0018-50 [I,A]; C08G0065-00 [I,C*]; C08G0065-26

[I,A]
 GB 1586019 ECLA C08G018/18R; C08G018/50C3; C08G065/26C1
 IPCI C08G0018-18 [ICM]; C08G0018-00 [ICM,C*]; C08G0018-14 [ICS]; C08L0071-00 [ICS]
 IPCR C08G0018-00 [I,C*]; C08G0018-18 [I,A]; C08G0018-50 [I,A]; C08G0065-00 [I,C*]; C08G0065-26 [I,A]
 BR 7803348 IPCI C08G0018-18 [ICM]; C08G0018-40 [ICS]; C08G0018-00 [ICS,C*]
 IPCR C08G0018-00 [I,A]; C08G0018-00 [I,C*]; C08G0018-18 [I,A]; C08G0018-30 [I,A]; C08G0018-32 [I,A]; C08G0018-50 [I,A]; C08G0065-00 [I,C*]; C08G0065-26 [I,A]
 JP 53149299 ECLA C08G018/18R; C08G018/50C3; C08G065/26C1
 IPCI C08G0018-14 [ICM]; C08G0018-18 [ICA]; C08G0018-00 [ICA,C*]
 IPCR C08G0018-00 [I,A]; C08G0018-00 [I,C*]; C08G0018-18 [I,A]; C08G0018-30 [I,A]; C08G0018-32 [I,A]; C08G0018-50 [I,A]; C08G0065-00 [I,C*]; C08G0065-26 [I,A]
 FR 2393024 IPCI C08L0071-00 [ICM]; C08G0018-14 [ICS]; C08K0005-17 [ICS]; C08K0005-00 [ICS,C*]
 IPCR C08G0018-00 [I,A]; C08G0018-00 [I,C*]; C08G0018-18 [I,A]; C08G0018-30 [I,A]; C08G0018-32 [I,A]; C08G0018-50 [I,A]; C08G0065-00 [I,C*]; C08G0065-26 [I,A]
 AB Catalytically stable polyol mixts. for the preparation of polyurethane foams comprised a halogenated polyol with an acid-blocked amine as catalyst. Thus, a resin [69620-14-0] foam prepared by mixing a halogenated polyol (prepared by condensation of 4,4,4-trichloro-1,2-epoxybutane with an equimol. mixture of ethylene glycol and α -D-glucose monohydrate) 100, an addnl. polyol (caprolactone-glycerin copolymer) 20, a wetting agent 2, trimethylbutanediamine monoformate [69418-55-9] catalyst 5, blowing agent 36, and PAPI 117.5 parts had cream formation time 14 s, gel formation time 72 s, time to freedom from tackiness 105 s, and foam formation time 130 s.
 ST amine catalyst polyurethane foam
 IT Polymerization catalysts
 (acid-blocked amines, for polyurethane foams)
 IT Urethane polymers, preparation
 RL: PREP (Preparation)
 (manufacture of cellular, acid-blocked amines as catalysts for)
 IT 59101-30-3 68459-80-3 69418-55-9 69418-56-0
 RL: CAT (Catalyst use); USES (Uses)
 (catalysts, for polyurethane foam manufacture)
 IT 69620-14-0P
 RL: PREP (Preparation)
 (manufacture of cellular, catalysts for)
 L6 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1976:646918 CAPLUS
 DN 85:64918
 OREF 85:10443a,10446a
 ED Entered STN: 12 May 1984
 TI Epoxy group-containing, quaternary ammonium salt-containing resins
 IN Bosso, Joseph F.; Wismer, Marco
 PA PPG Industries, Inc., USA
 SO U. S. Publ. Pat. Appl. B, 12 pp.
 CODEN: USXXDP
 DT Patent
 LA English
 IC C08G
 INCL 260029200EP
 CC 42-7 (Coatings, Inks, and Related Products)

FAN.CNT 12

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 455686	I5	19760302	US 1974-455686	19740328
	US 4001156	A	19770104		
	FR 2051662	A5	19710409	FR 1970-25584	19700709
	US 4001101	A	19770104	US 1971-167470	19710729
	FR 2118887	A6	19720804	FR 1971-29442	19710811
	FR 2118887	A2	19720804		
	DE 2142449	A	19720629	DE 1971-2142449	19710825
	DE 2142449	C2	19820519		
	AT 321430	B	19750325	AT 1971-10973	19711221
	US 3839252	A	19741001	US 1972-277007	19720801
	US 4191674	A	19800304	US 1977-844944	19771025
	PRAI	US 1968-772366	A3	19681031	
US 1969-840847		A2	19690710		
US 1969-840848		A2	19690710		
US 1970-56730		A2	19700720		
US 1970-100825		A2	19701222		
US 1970-100834		A2	19701222		
US 1971-129267		A2	19710329		
US 1971-158063		A2	19710629		
US 1971-167470		A2	19710729		
US 1972-277697		A2	19720803		
US 1971-167476		A3	19710729		
US 1975-599260		A2	19750725		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 455686	IC	C08G
	INCL	260029200EP
	IPCI	C08G0051-24 [ICM]
	IPCR	C08G0059-00 [I,C*]; C08G0059-40 [I,A]; C08G0059-50 [I,A]; C08G0059-52 [I,A]; C08G0059-58 [I,A]; C08G0059-64 [I,A]; C09D0005-44 [I,C*]; C09D0005-44 [I,A]
FR 2051662	NCL	292/284.000; 024/580.100; 024/704.100; 024/DIG.031; 523/421.000; 523/414.000; 523/416.000; 523/417.000; 523/420.000; 528/111.000; 528/121.000; 528/407.000
	ECLA	C08G059/40B5; C08G059/50; C08G059/52; C08G059/58; C08G059/64; C09D005/44D4B
	IPCI	C23B0013-00 [ICM]; C08G0033-00 [ICS]; C08G0030-00 [ICS]; C08G0049-00 [ICS]
	IPCR	C08G0059-00 [I,C*]; C08G0059-00 [I,A]; C08G0059-14 [I,A]; C08G0059-52 [I,A]; C08G0059-64 [I,A]; C09D0005-44 [I,C*]; C09D0005-44 [I,A]
US 4001101	IPCI	C25D0013-06 [ICM]; C25D0013-04 [ICM,C*]
	IPCR	C08G0059-00 [I,C*]; C08G0059-40 [I,A]; C08G0059-50 [I,A]; C08G0059-52 [I,A]; C08G0059-58 [I,A]; C08G0059-64 [I,A]; C09D0005-44 [I,C*]; C09D0005-44 [I,A]
	NCL	204/502.000; 523/445.000
	ECLA	C08G059/40B5; C08G059/50; C08G059/52; C08G059/58; C08G059/64; C09D005/44D4K
FR 2118887	IPCR	C08G0059-00 [I,C*]; C08G0059-40 [I,A]; C08G0059-50 [I,A]; C08G0059-58 [I,A]; C09D0005-44 [I,C*]; C09D0005-44 [I,A]
	ECLA	C08G059/40B5; C08G059/50; C08G059/58; C09D005/44D4
DE 2142449	IPCI	C08G0059-14 [ICM]; C08G0059-00 [ICM,C*]
	IPCR	C08G0059-00 [I,C*]; C08G0059-40 [I,A]; C08G0059-50 [I,A]; C08G0059-58 [I,A]; C09D0005-44 [I,C*]; C09D0005-44 [I,A]

AT 321430 ECLA C08G059/40B5; C08G059/50; C08G059/58; C09D005/44D4B
 IPCI C23B0013-00 [ICM]
 IPCR C25D0013-04 [I,C*]; C25D0013-06 [I,A]
 US 3839252 IPCI C08B0013-00 [ICM]; C08G0030-16 [ICS]; C08G0051-24 [ICS]
 IPCR C09D0005-44 [I,C*]; C09D0005-44 [I,A]
 NCL 523/414.000; 204/501.000; 523/402.000; 523/417.000;
 523/420.000; 523/421.000; 523/426.000; 528/219.000
 ECLA C09D005/44D4B
 US 4191674 IPCI C25D0013-06 [ICM]; C25D0013-04 [ICM,C*]
 IPCR C09D0005-44 [I,C*]; C09D0005-44 [I,A]
 NCL 525/327.300; 523/414.000; 524/901.000; 525/379.000;
 525/531.000; 528/112.000
 ECLA C09D005/44K
 AB The title resins, useful as water-dispersible electrophoretic coatings,
 are prepared by reaction of polyepoxides with 1-50 phr amine salt at
 70-100° in the presence of 1.75-20% H2O and adding B(OH)3
 [11113-50-1] or a hydrolyzable derivative. Thus, heating 1770 parts Epon 829
 (epoxy resin) [37325-21-6] and 302 parts bisphenol A 45 min at
 180-5° gives a resin with epoxy equivalent 330-50. Heating this resin
 500, 75% 2-(dimethylamino)ethanol lactate (salt) 105, and H2O 24.3 parts
 62 min at 92-102° gives a resin, epoxy equivalent 1050, OH number 338,
 quaternary ammonium lactate content 0.666 mequiv./g solids, Gardner-Holdt
 viscosity of 50% EtOCH2CH2OH solution H-I. Diluting 100 parts resin with H2O
 to 10% solids, adding 100 parts 4.5% aqueous B(OH)3, coating on Al panels for 30
 sec at 150 V and 77°F, and baking 30 min at 350°F gives a
 hard, glossy, Me2CO-resistant film. In the absence of B(OH)3, the film is
 soft.
 ST epoxy resin coating electrophoretic; dimethylaminoethanol lactate epoxy
 coating; boric acid epoxy coating
 IT Quaternary ammonium compounds, uses and miscellaneous
 RL: USES (Uses)
 (epoxy resin coatings containing, electrophoretic)
 IT Coating materials
 (epoxy resin-alkanolamine salt reaction products, electrophoretic,
 containing boric acid)
 IT Formic acid, compound with 2-(dimethylamino)ethanol (1:1), reaction products
 with epoxy resins
 Oxirane, (chloromethyl)-, polymer with
 4,4'-(1-methylethylidene)bis[phenol], reaction products with
 (dimethylamino)ethanol salts
 Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane,
 reaction products with (dimethylamino)ethanol salts
 Propanoic acid, 2-hydroxy-, compound with 2-(dimethylamino)ethanol (1:1),
 reaction products with epoxy resins
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings, electrophoretic, containing boric acid derivs.)
 IT 56669-87-5D, Ethanol, 2-(dimethylamino)-, 2-hydroxypropanoate (salt),
 reaction products with epoxy resins 59101-30-3D, Ethanol,
 2-(dimethylamino)-, formate (salt), reaction products with epoxy resins
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings, electrophoretic, containing boric acid derivs.)
 IT 10043-35-3 36711-54-3
 RL: USES (Uses)
 (epoxy resin electrophoretic coatings containing)
 => s (dimethylaminoethanol or dimethylamino ethanol) and (formic or formate)
 2798 DIMETHYLAMINOETHANOL
 77799 DIMETHYLAMINO
 324073 ETHANOL
 1061 DIMETHYLAMINO ETHANOL

```

(DIMETHYLAMINO(W)ETHANOL)
57184 FORMIC
45920 FORMATE
L7 56 (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND (FORMIC OR
    FORMATE)

=> s ionic and l7
    304581 IONIC
L8 0 IONIC AND L7

=> d his

(FILE 'HOME' ENTERED AT 12:57:44 ON 19 MAR 2009)

FILE 'REGISTRY' ENTERED AT 12:58:22 ON 19 MAR 2009
    E N,N-DIMETHYLETHANOLAMMONIUM FORMATE/CN
    E E2
L1 1 S E3

FILE 'CAPLUS' ENTERED AT 13:01:52 ON 19 MAR 2009
L2 1 S US20070185330/PN
L3 2 S DIMETHYLETHANOLAMMONIUM AND FORMATE

FILE 'CAPLUS' ENTERED AT 13:15:01 ON 19 MAR 2009

FILE 'REGISTRY' ENTERED AT 13:15:11 ON 19 MAR 2009
L4 2 S 59101-30-3/RN OR 53518-18-6/RN

FILE 'CAPLUS' ENTERED AT 13:16:40 ON 19 MAR 2009
    S 59101-30-3/REG#

FILE 'REGISTRY' ENTERED AT 13:18:46 ON 19 MAR 2009
L5 1 S 59101-30-3/RN

FILE 'CAPLUS' ENTERED AT 13:18:47 ON 19 MAR 2009
L6 6 S L5
L7 56 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND (FORMIC O
L8 0 S IONIC AND L7

=> s l7 not l6
L9 55 L7 NOT L6

=> d l-55 all

L9 ANSWER 1 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2009:140081 CAPLUS
DN 150:214372
ED Entered STN: 05 Feb 2009
TI Preparation of 2-aminobenzothiazole derivatives as phosphoinositide
3-kinase (PI3 kinase) modulators
IN Booker, Shon; D'Angelo, Noel; D'Amico, Derin C.; Kim, Tae-Seong; Liu,
Longbin; Meagher, Kristin; Norman, Mark H.; Panter, Kathleen; Schenkel,
Laurie B.; Smith, Adrian L.; Tamayo, Nuria A.; Whittington, Douglas A.;
Xi, Ning; Yang, Kevin
PA Amgen Inc., USA
SO PCT Int. Appl., 279pp.
CODEN: PIXXD2
DT Patent
LA English
CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1
FAN.CNT 1

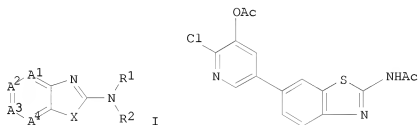
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	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2009017822	A2	20090205	WO 2008-US9312	20080801
	W:	AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
	RW:	AE, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	US 20090054405	A1	20090226	US 2008-221416	20080801
PRAI	US 2007-963263P	P	20070802		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	WO 2009017822	IPCI	C07D0277-82 [I,A]; C07D0277-00 [I,C*]; C07D0413-04 [I,A]; C07D0413-00 [I,C*]; C07D0417-04 [I,A]; C07D0417-14 [I,A]; C07D0417-00 [I,C*]; C07D0513-04 [I,A]; C07D0513-00 [I,C*]; A61K0031-423 [I,A]; A61K0031-424 [I,A]; A61K0031-428 [I,A]; A61K0031-429 [I,A]; A61P0035-00 [I,A]
	US 20090054405	IPCI	A61K0031-55 [I,A]; C07D0401-14 [I,A]; C07D0401-10 [I,A]; C07D0401-00 [I,C*]; C07D0413-14 [I,A]; C07D0413-00 [I,C*]; A61P0035-00 [I,A]; A61K0031-435 [I,A]; A61K0031-5377 [I,A]; A61K0031-5375 [I,C*]; A61K0031-497 [I,A]; A61K0031-4965 [I,C*]
		NCL	514/217.040; 544/333.000; 544/123.000; 544/405.000; 540/597.000; 514/256.000; 514/235.800; 514/255.050

GI



II

AB The title compds. [I; A¹, A², A³, A⁴ = (un)substituted CH or N, provided that no more than two of A¹, A², A³ and A⁴ is N; X = O or S; R¹ = H, C1-6 alkyl, C2-6 alkenyl, C2-6 alkynyl, or C3-6 cycloalkyl; R² = C1-6 each optionally substituted alkyl-R^{7a}, C2-6 alkenyl-R^{7a}, C2-6 alkynyl-R^{7a}, or C3-6 cycloalkyl-R^{7a}, C(O)R^{7a}, C(O)NHR^{7a}, CO₂R^{7a}, S(O)2R^{7a} or a partially or fully saturated or fully unsatd. 5- or 6-membered monocyclic ring formed of carbon atoms and including 1-3 heteroatoms selected from N, O and S; R^{7a} = H, each optionally substituted C1-8 alkyl, C2-8 alkenyl, C2-8 alkynyl, C3-6 cycloalkyl, or C4-8 cycloalkenyl, NR⁸R⁹, NR⁹R⁹, OR⁸, SR⁸, OR⁹, SR⁹, C(O)R⁸, OC(O)R⁹, COOR⁹, C(O)R⁹, C(O)NR⁸R⁹, NR⁹C(O)R⁹, C(O)NR⁹R⁹, NR⁹C(O)NR⁹R⁹, S(O)2R⁸, S(O)2R⁹, S(O)2NR⁸R⁹, S(O)2NR⁹R⁹, NR⁹S(O)2NR⁹R⁹, NR⁹S(O)2R⁸ or NR⁹S(O)2R⁹; R⁸ = a partially or fully saturated or unsatd. 3-8 membered monocyclic or 6-12 membered bicyclic ring system, said ring system formed of carbon atoms optionally including 1-3 heteroatoms if

monocyclic or 1-6 heteroatoms if bicyclic, said heteroatoms selected from O, N, or S, if bicyclic, said heteroatoms selected from O, N, or S, etc.] or pharmaceutically acceptable salts thereof were prepared. The present invention comprises a new class of compds. capable of modulating the activity of PI3 kinase and, accordingly, useful for treatment of PI3 kinase-mediated diseases, including melanomas, leukemias, glioblastomas, carcinomas and other cancer-related conditions. Thus, 0.0683 g N-[6-[6-chloro-5-[(2-methoxyethoxy)methoxy]pyridin-3-yl]-1,3-benzothiazol-2-yl]acetamide was treated with 5 mL TFE (2,2,2-trifluoroethanol)(sic) and 2.0 M HCl (0.251 mL) at reflux in a 120° oil bath for 45 min. The reaction mixture was cooled, evaporated in vacuo, suspended in ethanol, heated with a 120° oil bath, cooled, evaporated, dissolved in dry pyridine, stirred with 5 Å activated mol. sieves for 1 h, filtered, treated with Ac2O, and heated using a 70° coil bath for 5 h to give 5-(2-acetamido-1,3-benzothiazol-6-yl)-2-chloropyridin-3-yl acetate (II) (0.0314 g, 51.8% yield). II showed IC50 of 0.0020, 0.0122, and 0.0017 µg/mL against PI3α, PI3β, and HCT 116 human colon carcinoma cell line, resp.

- ST PI3 kinase modulator; aminobenzothiazole prepn phosphoinositide 3 kinase modulator
- IT Neuroglia, neoplasm
(glioblastoma; preparation of 2-aminobenzothiazole derivs. as PI3 kinase modulators)
- IT Human
Leukemia
(preparation of 2-aminobenzothiazole derivs. as PI3 kinase modulators)
- IT Antitumor agents
Carcinoma
Melanoma
Neoplasm
(preparation of 2-aminobenzothiazole derivs. as PI3 kinase modulators for treatment of PI3 kinase mediated diseases including melanomas, carcinomas, and other cancer-related conditions)
- IT 1112980-55-8P, N-[6-[6-Chloro-5-[(1-methylethyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-65-0P,
N-[6-(5-Amino-6-methyl-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide
1112980-79-6P, N-[5-(3-Aminophenyl)-[1,3]thiazolo[5,4-b]pyridin-2-yl]acetamide 1112982-49-6P, 5-(1,3-Benzothiazol-6-yl)-2-chloro-3-pyridinol 1112982-50-9P, 5-(1,3-Benzothiazol-6-yl)-2-chloropyridin-3-yl acetate
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(intermediate; preparation of 2-aminobenzothiazole derivs. as PI3 kinase modulators)
- IT 433-14-7P, 4-Fluoro-N-methylbenzenesulfonamide 1216-97-3P,
N-(5-Bromopyridin-3-yl)-4-methylbenzenesulfonamide 2922-45-4P,
3-Pyridinesulfonamide 7010-86-8P, 4-Methoxy-N-methylbenzenesulfonamide 15864-32-1P 16628-26-5P, N-(6-Bromo-1,3-benzothiazol-2-yl)acetamide 20358-05-8P, 7-Bromobenzo[d]thiazol-2-amine 23451-95-8P,
2-Amino-5-bromobenzenethiol 35088-84-7P,
N-Ethyl-4-methoxybenzenesulfonamide 53218-26-1P, 6-Bromobenzo[d]thiazole 70232-59-6P, 5-Bromo-N-methyl-3-nitropyridin-2-amine 75104-92-6P,
6-Bromo-N-methylbenzo[d]thiazol-2-amine 89415-54-3P,
5-Bromo-N-methylpyridine-2,3-diamine 173020-15-0P,
N-Methyl-3-methylbenzenesulfonamide 179626-68-7P,
2-(tert-Butoxycarbonylamino)-4-benzothiazole-6-carbohydrazide 188057-49-0P 214911-10-1P, 6-Fluoro-2-iodopyridin-3-ol 476280-90-7P,
N-(6-Bromo-1,3-benzothiazol-2-yl)cyclohexanecarboxamide 851169-58-9P,
2-Fluoro-N-methylbenzenesulfonamide 873383-06-3P,
5-Bromo-N-methylpyridin-3-amine 885069-14-7P,
N-[6-(4,4,5,5-Tetramethyl-1,3,2-dioxaborolan-2-yl)-1,3-benzothiazol-2-

yl]acetamide 911434-04-3P, Diethyl
 2-(5-bromo-3-nitropyridin-2-yl)malonate 911434-05-4P,
 5-Bromo-2-methyl-3-nitropyridine 914358-73-9P,
 5-Bromo-2-methylpyridin-3-amine 947248-67-1P,
 N-(6-Bromo-4-fluoro-1,3-benzothiazol-2-yl)acetamide 1002309-47-8P,
 6-(4,4,5,5-Tetramethyl-1,3,2-dioxaborolan-2-yl)-1,3-benzothiazole
 1112982-56-5P, 2-Chloro-6-(2-fluorophenylthio)pyridine 1112982-57-6P,
 2-Chloro-6-(2-fluorophenylsulfonyl)pyridine 1112982-59-8P,
 2-Chloro-6-(4-fluorophenylsulfonyl)pyridine 1112982-61-2P,
 2-Chloro-6-(4-methoxyphenylthio)pyridine 1112982-62-3P,
 2-Chloro-6-(4-methoxyphenylsulfonyl)pyridine 1112982-63-4P,
 N-(6-Chloropyridin-2-yl)benzenesulfonamide 1112982-65-6P,
 N-[6-(6-Aminopyridin-2-yl)-1,3-benzothiazol-2-yl]acetamide
 1112982-66-7P, N-(6-Chloropyridin-2-yl)-N-methyl-4-
 methylbenzenesulfonamide 1112982-68-9P,
 N-(7-Bromo-1,3-benzothiazol-2-yl)acetamide 1112982-69-0P,
 4-Bromo-2-(4-fluorophenylthio)thiazole 1112982-70-3P,
 4-Bromo-2-(4-fluorophenylsulfonyl)thiazole 1112982-71-4P,
 N-Acetyl-N'-(4-bromo-2,6-difluorophenyl)thiourea 1112982-72-5P,
 N-[4-Fluoro-6-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-1,3-
 benzothiazol-2-yl]acetamide 1112982-73-6P,
 5-Bromo-2-chloro-N-isopropylpyridin-3-amine 1112982-74-7P,
 5-Bromo-N'-isopropyl-N-methylpyridine-2,3-diamine 1112982-75-8P,
 6-Bromo-2,2,3-trimethyl-2,3-dihydro-1H-imidazo[4,5-b]pyridine
 1112982-76-9P, N-(5-Bromothiazolo[5,4-b]pyridin-2-yl)acetamide
 1112982-77-0P, N-(5-Bromo-2-chloropyridin-3-yl)-4-(2-hydroxypropan-2-
 yl)benzenesulfonamide 1112982-79-2P,
 3-[N,N-Bis(4-fluorophenylsulfonyl)amino]-5-bromo-2-chloropyridine
 1112982-80-5P, N-[6-[6-Chloro-5-[N,N-bis[(4-fluorophenyl)sulfonyl]amino]-3-
 pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112982-81-6P,
 N-(5-Bromo-2-chloropyridin-3-yl)-4-methoxybenzenesulfonamide
 1112982-82-7P, N-(5-Bromo-2-chloropyridin-3-yl)-N-(4-
 methoxyphenylsulfonyl)-4-methoxybenzenesulfonamide 1112982-83-8P,
 Pentafluorophenyl 2-(tert-butoxycarbonyl)-1,3-benzothiazole-6-carboxylate
 1112982-85-0P 1112982-86-1P 1112982-87-2P,
 N-(5-Bromo-2-chloropyridin-3-yl)cyclohexanesulfonamide 1112982-88-3P,
 N-[6-(5-Amino-6-chloropyridin-3-yl)-1,3-benzothiazol-2-yl]acetamide
 1112982-89-4P, N-[6-(2-Chloropyridin-4-yl)-1,3-benzothiazol-2-yl]acetamide
 1112982-90-7P, N-(5-Bromopyridin-3-yl)-N-methyl-4-
 (trifluoromethyl)benzenesulfonamide 1112982-91-8P,
 N-(6-Chloropyridin-2-yl)-N-methyl-3-methylbenzenesulfonamide
 1112982-92-9P, N-(5-Bromopyridin-3-yl)-4-fluorobenzenesulfonamide
 1112982-94-1P, 1-[2-[(5-Bromopyridin-3-yl)oxy]ethyl]pyrrolidin-2-one
 1112983-05-7P, 5-Bromo-2-iodo-3-[(2-methoxyethoxy)methoxy]pyridine
 1112983-06-8P, 5-Bromo-2-chloro-3-[(2-methoxyethoxy)methoxy]pyridine
 1112983-08-0P, 2-[(5-Bromo-2-chloropyridin-3-yl)oxy]propanenitrile
 1112983-11-5P, 2-[(5-Bromopyridin-3-yl)oxy]acetonitrile 1112983-13-7P,
 2-[(5-Bromo-2-chloropyridin-3-yl)oxy]acetonitrile 1112983-14-8P,
 2-[(5-Bromopyridin-3-yl)oxy]ethanamine hydrochloride 1112983-17-1P,
 2-[(5-Bromopyridin-3-yl)oxy]ethanamine 1112983-18-2P,
 N-[2-[(5-Bromopyridin-3-yl)oxy]ethyl]-2-methoxyacetamide 1112983-19-3P,
 1-[[[(5-Bromopyridin-3-yl)oxy]methyl]cyclopropanamine 1112983-20-6P,
 (R)-5-[[[(5-Bromopyridin-3-yl)oxy]methyl]pyrrolidin-2-one 1112983-21-7P,
 6-[6-(3-Azabicyclo[3.2.2]nonan-3-yl)pyrazin-2-yl]benzo[d]thiazol-2-amine
 1112983-22-8P, N-[6-(4,4,5,5-Tetramethyl-1,3,2-dioxaborolan-2-yl)-1,3-
 benzothiazol-2-yl]cyclohexanecarboxamide 1112983-23-9P,
 N-[2-Chloro-5-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)pyridin-3-yl]-4-
 methoxybenzenesulfonamide 1112983-24-0P,
 6-Bromo-N-isopropylbenzo[d]thiazol-2-amine 1112983-25-1P,
 6-Bromo-N-(cyclohexylmethyl)-1,3-benzothiazol-2-amine 1112983-26-2P,
 N-(5-Bromo-2-chloropyridin-3-yl)-3-(difluoromethoxy)benzenesulfonamide
 1112983-27-3P, N-[2-Chloro-5-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-

yl)pyridin-3-yl]-3-(difluoromethoxy)benzenesulfonamide 1112983-28-4P,
 N-(5-Bromo-2-chloropyridin-3-yl)piperidine-1-sulfonamide 1112983-29-5P,
 N-Methyl-6-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-1,3-benzothiazol-
 2-amine 1112983-31-9P, N-[2-Chloro-5-(4,4,5,5-tetramethyl-1,3,2-
 dioxaborolan-2-yl)pyridin-3-yl]-4-fluorobenzenesulfonamide
 1112983-33-1P, 6-[6-Chloro-5-[(2-methoxyethoxy)methoxy]pyridin-3-yl]-1,3-
 benzothiazole 1112983-34-2P, 6-Fluoro-2-iodo-3-[(2-
 methoxyethoxy)methoxy]pyridine 1112983-35-3P,
 6-Fluoro-3-[(2-methoxyethoxy)methoxy]-2-(trifluoromethyl)pyridine
 1112983-36-4P, 6-Fluoro-4-iodo-3-[(2-methoxyethoxy)methoxy]-2-
 (trifluoromethyl)pyridine 1112983-37-5P,
 2-Fluoro-3-iodo-5-[(2-methoxyethoxy)methoxy]-6-(trifluoromethyl)pyridine
 1112983-39-7P, 2-Fluoro-3,4-diiodo-5-[(2-methoxyethoxy)methoxy]-6-
 (trifluoromethyl)pyridine 1112983-40-0P,
 6-[2-Fluoro-5-[(2-methoxyethoxy)methoxy]-6-(trifluoromethyl)pyridin-3-yl]-
 2-methylbenzo[d]thiazole 1113041-99-8P 1113042-01-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)

(intermediate; preparation of 2-aminobenzothiazole derivs. as PI3 kinase
 modulators)

IT	1112983-41-1P	1112983-42-2P	1112983-43-3P	1112983-44-4P
	1112983-45-5P	1112983-46-6P	1112983-48-8P	1112983-49-9P
	1112983-50-2P	1112983-51-3P	1112983-52-4P	1112983-53-5P
	1112983-54-6P	1112983-55-7P	1112983-56-8P	1112983-57-9P
	1112983-58-0P	1112983-59-1P	1112983-61-5P	1112983-62-6P
	1112983-63-7P	1112983-64-8P	1112983-65-9P	1112983-66-0P
	1112983-67-1P	1112983-68-2P	1112983-69-3P	1112983-70-6P
	1112983-71-7P	1112983-72-8P	1112983-73-9P	1112983-75-1P
	1112983-76-2P	1112983-77-3P	1112983-78-4P	1112983-79-5P
	1112983-80-8P	1112983-81-9P	1112983-83-1P	1112983-84-2P
	1112983-85-3P	1112983-86-4P	1112983-87-5P	1112983-89-7P
	1112983-90-0P	1112983-91-1P	1112983-92-2P	1112983-93-3P
	1112983-94-4P	1112983-96-6P	1112983-97-7P	1112983-98-8P
	1112983-99-9P	1112984-00-5P	1112984-01-6P	1112984-02-7P
	1112984-03-8P	1112984-04-9P	1112984-05-0P	1112984-08-3P
	1112984-09-4P	1112984-10-7P	1112984-11-8P	1112984-12-9P
	1112984-13-0P	1112984-14-1P	1112984-15-2P	1112984-16-3P
	1112984-18-5P	1112984-19-6P	1112984-20-9P	1112984-21-0P
	1112984-22-1P	1112984-23-2P	1112984-24-3P	1112984-25-4P
	1112984-26-5P	1112984-27-6P	1112984-28-7P	1112984-29-8P
	1112984-30-1P	1112984-31-2P	1112984-32-3P	1112984-33-4P
	1112984-34-5P	1112984-35-6P	1112984-36-7P	

RL: PAC (Pharmacological activity); PRPH (Prophetic); SPN (Synthetic
 preparation); THU (Therapeutic use); BIOL (Biological study); PREP
 (Preparation); USES (Uses)

(preparation of 2-aminobenzothiazole derivs. as PI3 kinase modulators)

IT	1112980-92-3P, N-[5-(2-Amino-1,3-benzothiazol-6-yl)-1,3,4-oxadiazol-2-yl]-4-fluorobenzenesulfonamide
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RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic
 preparation); THU (Therapeutic use); BIOL (Biological study); PREP
 (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of 2-aminobenzothiazole derivs. as PI3 kinase modulators)

IT	1112979-13-1P, N-[6-[2-[3-(3-Pyridinyl)propoxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-14-2P, N-[6-[2-[1-(3-Pyridinyl)methoxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-16-4P, N-[6-[2-(1-Benzyl)oxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-17-5P, N-[6-[2-(3-Phenylpropoxy)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-18-6P, N-[6-[2-(3-Methoxypropoxy)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-19-7P, N-[6-[2-(1-Methylethoxy)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-20-0P, N-[6-[2-(2-Phenylethoxy)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide
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1112979-21-1P, N-[6-[2-(3-Dimethylaminopropoxy)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-22-2P,
 N-[6-[2-(2-Dimethylaminoethoxy)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-23-3P, N-[6-[2-(3-Morpholinopropoxy)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-24-4P,
 N-[6-[2-(2-Morpholinoethoxy)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-25-5P, N-[6-[2-[(3-Fluorobenzyl)oxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-26-6P,
 N-[6-[2-(Benzyl-4-pyrimidinyl)-1,3-benzothiazol-2-yl]acetamide 1112979-27-7P, N-[6-[2-(3-Phenylpropyl)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-28-8P, N-[6-[2-(2-Phenylethyl)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-29-9P,
 N-[6-[2-[(4-Methoxyphenyl)sulfanyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-30-2P, N-[6-[2-[(4-Pyridinyl)methoxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-31-3P,
 N-[6-[2-[2-(3-Pyridinyl)ethoxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-32-4P, N-[6-[2-(Benzylsulfanyl)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-34-6P,
 N-[6-[2-[3-(1H-1,2,3-Triazol-1-yl)propoxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-35-7P, N-[6-[2-(Phenylsulfanyl)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-36-8P,
 N-[6-[2-[(6-Quinoliny)methoxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-37-9P, N-[6-[2-[(2-Fluorophenyl)sulfanyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-38-0P,
 N-[6-[2-[(1H-Indol-5-yl)methoxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-41-5P, N-[6-[2-[(1-Methyl-4-piperidinyl)methoxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-43-7P,
 N-[6-[2-[(4-Fluorophenyl)sulfanyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-45-9P, N-[6-[2-[(4-Methoxy-2-methylphenyl)sulfanyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-47-1P,
 N-[6-[2-[(2-Methoxyphenyl)sulfanyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-48-2P, N-[4-[(2-(Acetylamin)-1,3-benzothiazol-6-yl)-2-pyrimidinyl]sulfanyl]phenyl]acetamide 1112979-49-3P,
 N-[6-[2-[(2-tert-Butylphenyl)sulfanyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-51-7P, N-[6-[2-[(1-Methyl-4-piperidinyl)oxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-52-8P,
 N-[6-[2-[3-(2-Oxo-1,3-oxazolidin-3-yl)propoxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-53-9P,
 N-[6-[2-Phenoxy-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-54-0P, N-[6-[2-[(2-Methylphenyl)sulfanyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-55-1P,
 N-[6-[2-[(3-Methylphenyl)sulfanyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-56-2P, N-[6-[2-[(4-Methylphenyl)sulfanyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-57-3P,
 N-[6-[2-[(2-Methylbenzyl)sulfanyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-58-4P, N-[6-[2-[(4-Methoxybenzyl)oxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-59-5P,
 N-[6-[2-[(4-Fluorobenzyl)oxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-60-8P, N-[6-[2-[(1,3-Benzodioxol-5-yl)methoxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-61-9P,
 N-[6-[2-[(3-Methoxyphenyl)sulfanyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-62-0P, N-[6-[2-(2,2-Dimethylpropoxy)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-63-1P,
 N-[6-[2-[(1R)-1-Phenylethyl]oxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-64-2P, N-[6-[2-[3-(4-Pyridinyl)propoxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-65-3P,
 6-[2-[(3-Phenylpropyl)amino]-4-pyrimidinyl]-1,3-benzothiazol-2-amine 1112979-66-4P, N-[6-[2-[(3-Methoxypropyl)amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-67-5P,
 N-[6-[2-[(2-Methoxyethyl)amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112979-69-7P, 6-[2-[(2-Methoxyethyl)amino]-4-pyrimidinyl]-1,3-benzothiazol-2-amine 1112979-70-0P,

N-[6-[2-[(Benzyl)amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide
 1112979-71-1P, N-[6-[2-(Methylsulfonyl)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide
 1112979-72-2P, N-[6-(2-Methoxy-4-pyrimidinyl)-1,3-benzothiazol-2-yl]acetamide
 1112979-73-3P, N-[6-[2-(Dimethylamino)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide
 1112979-74-4P, N-[6-(2-Hydroxy-4-pyrimidinyl)-1,3-benzothiazol-2-yl]acetamide
 1112979-75-5P, N-[6-[2-[(Benzyl)oxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]-2-(4-morpholinyl)acetamide
 1112979-76-6P, N-[6-[2-[(Benzyl)oxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]-2-hydroxy-2-methylpropanamide
 1112979-77-7P, N-[6-[2-[(Benzyl)oxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]-N'-methylurea
 1112979-78-8P, N-[6-[2-[(Benzyl)oxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]propanamide
 1112979-79-9P, N-[6-[2-[(Benzyl)oxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]benzamide
 1112979-80-2P, N-[6-[2-[(Benzyl)oxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]-N',N'-dimethylglycinamide
 1112979-81-3P, N-[6-[2-[(4-Methoxyphenyl)sulfonyl]-1,3-thiazol-5-yl]-1,3-benzothiazol-2-yl]acetamide
 1112979-82-4P, N-[6-[2-[(4-Methoxyphenyl)sulfonyl]-1,3-thiazol-5-yl]-1,3-benzothiazol-2-yl]acetamide
 1112979-83-5P, N-[6-[2-[(2-Fluorophenyl)sulfonyl]-1,3-thiazol-4-yl]-1,3-benzothiazol-2-yl]acetamide
 1112979-84-6P, N-[6-[2-(Phenylsulfonyl)-1,3-thiazol-4-yl]-1,3-benzothiazol-2-yl]acetamide
 1112979-85-7P, N-[6-[6-(Phenylsulfonyl)-2-pyridinyl]-1,3-benzothiazol-2-yl]acetamide
 1112979-86-8P, N-[6-[6-[(4-Fluorophenyl)sulfonyl]-2-pyridinyl]-1,3-benzothiazol-2-yl]acetamide
 1112979-88-0P, N-[6-[6-[(3-Fluorophenyl)sulfonyl]-2-pyridinyl]-1,3-benzothiazol-2-yl]acetamide
 1112979-89-1P, N-[6-[6-[(4-Methoxyphenyl)sulfonyl]-2-pyridinyl]-1,3-benzothiazol-2-yl]acetamide
 1112979-90-4P, N-[6-[6-[(3-Methoxyphenyl)sulfonyl]-2-pyridinyl]-1,3-benzothiazol-2-yl]acetamide
 1112979-91-5P, N-[6-[6-[(2-Methoxyphenyl)sulfonyl]-2-pyridinyl]-1,3-benzothiazol-2-yl]acetamide
 1112979-92-6P, N-[6-(2-Amino-1,3-benzothiazol-6-yl)-2-pyridinyl]benzenesulfonamide
 1112979-93-7P, N-[6-(2-Amino-1,3-benzothiazol-6-yl)-2-pyridinyl]-2-fluorobenzenesulfonamide
 1112979-94-8P, N-[6-[6-[(2-Fluorophenyl)sulfonyl]amino]-2-pyridinyl]-1,3-benzothiazol-2-yl]acetamide
 1112979-95-9P, N-[6-[6-[Methyl[(4-methylphenyl)sulfonyl]amino]-2-pyridinyl]-1,3-benzothiazol-2-yl]acetamide
 1112979-96-0P, N-[6-[6-[Methyl(phenylsulfonyl)amino]-2-pyridinyl]-1,3-benzothiazol-2-yl]acetamide
 1112979-97-1P, N-[6-[2-[(Phenylsulfonyl)amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide
 1112979-98-2P, N-[6-[2-[(4-Methoxyphenyl)sulfonyl]amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide
 1112979-99-3P, N-[6-[2-[(3-Pyridinyl)sulfonyl]amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide
 1112980-00-3P, N-[6-[2-[(4-Fluorophenyl)sulfonyl]amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide
 1112980-01-4P, N-[6-[2-[(2-Fluorophenyl)sulfonyl]amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide
 1112980-02-5P, N-[6-[2-[(3-Fluorophenyl)sulfonyl]amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide
 1112980-03-6P, N-[6-[2-[(4-Methylphenyl)sulfonyl]amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide
 1112980-04-7P, N-[6-[2-[(4-Ethylphenyl)sulfonyl]amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide
 1112980-05-8P, N-[6-[2-[(3-Methoxyphenyl)sulfonyl]amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide
 1112980-06-9P, N-[4-[(4-[2-(Acetyl)amino]-1,3-benzothiazol-6-yl]-2-pyrimidinyl)sulfamoyl]phenyl]acetamide
 1112980-07-0P, N-[6-[2-[(3,4-Dimethoxyphenyl)sulfonyl]amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide
 1112980-08-1P, N-[6-[2-[(4-Methoxyphenyl)sulfonyl](methyl)amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide
 1112980-09-2P, N-[6-[2-[Ethyl[(4-methoxyphenyl)sulfonyl]amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide
 1112980-10-5P, N-[6-[2-[Methyl[(4-methylphenyl)sulfonyl]amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide
 1112980-11-6P,

N-[6-[2-[Methyl(phenylsulfonyl)amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-13-8P, N-[6-[2-[(2-Fluorophenyl)sulfonyl](methyl)amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-14-9P, N-[6-[2-[Methyl[(3-Methylphenyl)sulfonyl]amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-15-0P, N-[7-(3-Fluoro-4-methoxyphenyl)-1,3-benzothiazol-2-yl]acetamide 1112980-16-1P, N-[7-(4-Methoxyphenyl)-1,3-benzothiazol-2-yl]acetamide 1112980-17-2P, N-[7-(3-Methoxyphenyl)-1,3-benzothiazol-2-yl]acetamide 1112980-18-3P, N-[6-[2-[(4-Fluorophenyl)sulfonyl]-1,3-thiazol-4-yl]-1,3-benzothiazol-2-yl]acetamide 1112980-19-4P, N-[6-(2-Oxo-2,3-Dihydrobenzo[d]thiazol-4-yl)-1,3-benzothiazol-2-yl]acetamide 1112980-20-7P, N-[6-(1H-Indazol-4-yl)-1,3-benzothiazol-2-yl]acetamide 1112980-21-8P, N-[6-[2-[(1-Methyl-1-phenylethyl)amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-22-9P, N-[6-(2-Amino-6-methyl-4-pyrimidinyl)-1,3-benzothiazol-2-yl]acetamide 1112980-23-0P, N-[6-[2-(3-Hydroxypropoxy)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-24-1P, N-[6-[2-(4-Hydroxybutoxy)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-25-2P, N-[6-[2-(2-Hydroxyethoxy)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-27-4P, N-[6-[2-[(4-Methylbenzyl)oxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-28-5P, N-[6-[2-[(3-Methylbenzyl)oxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-29-6P, N-[6-[2-[(3-Methoxybenzyl)oxy]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-30-9P, N-[6-[2-[(3-Fluorophenyl)sulfonyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-31-0P, N-[6-[6-Methyl-5-[(phenylsulfonyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-32-1P, N-[6-[5-[(4-Fluorophenyl)sulfonyl]amino]-6-methyl-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-34-3P, N-[6-[5-[(2-Fluorophenyl)sulfonyl]amino]-6-methyl-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-35-4P, N-[6-[6-Methyl-5-[(3-(trifluoromethyl)phenyl)sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-36-5P, N-[6-[5-[(4-tert-Butylphenyl)sulfonyl]amino]-6-methyl-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-37-6P, N-[6-[5-[(3-(Difluoromethoxy)phenyl)sulfonyl]amino]-6-methyl-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-38-7P, N-[6-[5-[(4-Methoxyphenyl)sulfonyl]amino]-6-methyl-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-39-8P, N-[4-Fluoro-6-[5-[(4-(trifluoromethyl)phenyl)sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-40-1P, N-[6-[6-[(4-Methoxyphenyl)sulfonyl]amino]-2-pyrazinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-41-2P, N-[6-[5-[(4-Acetylphenyl)sulfonyl]amino]-6-chloro-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-42-3P, N-[6-[6-[(4-Methoxyphenyl)sulfonyl]-2-pyrazinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-43-4P, N-[6-[6-[(2-Fluorophenyl)sulfonyl]-2-pyrazinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-44-5P, N-[6-[2-[(2,4-Dimethylphenyl)sulfonyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-45-6P, N-[6-[2-[(2,5-Dimethylphenyl)sulfonyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-46-7P, N-[6-[5-(Dimethylamino)-6-methoxy-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-47-8P, N-[6-[2-[(2-Chlorophenyl)sulfonyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-48-9P, N-[6-[6-[(4-Methoxyphenyl)sulfonyl](methyl)amino]-2-pyrazinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-49-0P, N-[6-[6-[Methyl[(4-methylphenyl)sulfonyl]amino]-2-pyrazinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-50-3P, N-[6-[2-[(3,4-Dimethylphenyl)sulfonyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-51-4P, N-[6-[2-[(2,6-Dimethylphenyl)sulfonyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-53-6P, N-[6-[6-[(2-Fluorophenyl)sulfonyl]-2-pyrazinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-54-7P, N-[4-Fluoro-6-[2-[(4-

methoxyphenyl)sulfonyl]amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-56-9P, N-[6-[6-[(4-Methoxyphenyl)sulfonyl]-2-pyrazinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-57-0P, N-[6-[2-[(2-Bromophenyl)sulfonyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-58-1P, N-[6-[6-[(Benzyl)oxy]-2-pyrazinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-59-2P, N-[5-[3-[(4-Methylphenyl)sulfonyl]aminophenyl]-[1,3]thiazolo[5,4-b]pyridin-2-yl]acetamide 1112980-60-5P, N-[4-Fluoro-6-[6-[(2-fluorophenyl)sulfonyl]-2-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-61-6P, N-[6-[2-[(4-Chlorophenyl)sulfonyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-62-7P, N-[6-[2-[(4-Bromophenyl)sulfonyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-63-8P, N-[6-[2-[(3-Chlorophenyl)sulfonyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-64-9P, N-[6-[6-Chloro-5-[(1-methylethyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]-2-(2-pyridinyl)acetamide 1112980-66-1P, N-[4-Fluoro-6-[2-[(4-methoxyphenyl)sulfonyl](methyl)amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-67-2P, N-[6-[6-Chloro-5-[(1-methylethyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]-2-methoxyacetamide 1112980-68-3P, N-[6-[6-Methoxy-5-[(1-methylethyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-69-4P, N-[5-[3-[(4-Methoxyphenyl)sulfonyl]amino]phenyl]-[1,3]thiazolo[5,4-b]pyridin-2-yl]acetamide 1112980-70-7P, N-[6-[6-(Methylamino)-5-[(1-methylethyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-71-8P, N-[4-Fluoro-6-[6-[(4-methoxyphenyl)sulfonyl]-2-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-72-9P, N-[6-[2-[(3,5-Dimethylphenyl)sulfonyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-74-1P, N-[6-[6-Chloro-5-[(1-methylethyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]-2-[(2S)-tetrahydro-2-furanyl]acetamide 1112980-75-2P, N-[6-[5-Amino-6-(methylamino)-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-76-3P, N-[6-[6-[3-(Dimethylamino)propoxy]-5-[(1-methylethyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-77-4P, N-[6-[2-[(2-(1-Methylethyl)phenyl)sulfonyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-78-5P, 6-[6-Chloro-5-[(1-methylethyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-amine 1112980-80-9P, N-[6-(2,2,3-Trimethyl-2,3-dihydro-1H-imidazo[4,5-b]pyridin-6-yl)-1,3-benzothiazol-2-yl]acetamide 1112980-81-0P, N-[6-[2-[(2,5-Dimethoxyphenyl)sulfonyl]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-83-2P, N-[6-[6-[2-(Dimethylamino)ethoxy]-5-[(1-methylethyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-84-3P, N-[6-[2-(4-Morpholinyl)-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-85-4P, N-[6-[6-Chloro-5-[(4-(1-hydroxy-1-methylethyl)phenyl)sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-86-5P, N-[6-[6-Chloro-5-[(4-(4-fluorophenyl)sulfonyl]amino)-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-87-6P, N-[6-[6-Chloro-5-[(4-methoxyphenyl)sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-88-7P, N-[6-[5-[(4-Fluorophenyl)sulfonyl]amino]-1,3,4-oxadiazol-2-yl]-1,3-benzothiazol-2-yl]acetamide 1112980-89-8P, N-[5-(2-Amino-1,3-benzothiazol-6-yl)-1,3,4-oxadiazol-2-yl]-4-methylbenzenesulfonamide 1112980-91-2P, tert-Butyl [6-[5-[(4-fluorophenyl)sulfonyl]amino]-1,3,4-oxadiazol-2-yl]-1,3-benzothiazol-2-yl]carbamate 1112980-95-6P, tert-Butyl [6-[5-(benzyl)(methylsulfonyl)amino]-1,3,4-oxadiazol-2-yl]-1,3-benzothiazol-2-yl]carbamate 1112980-96-7P, N-[6-[6-Chloro-5-[(cyclohexylsulfonyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-97-8P, N-[6-[6-Chloro-5-[(3-(trifluoromethyl)phenyl)sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-98-9P, N-[6-[5-[(3-tert-Butylphenyl)sulfonyl]amino]-6-chloro-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112980-99-0P, N-[6-[6-Chloro-5-[(4-

hydroxyphenyl)sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide
 1112981-00-6P, N-[6-[6-Chloro-5-[(3,5-dichlorophenyl)sulfonyl]amino]-3-
 pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-01-7P,
 N-[6-[6-Chloro-5-[(3,5-difluorophenyl)sulfonyl]amino]-3-pyridinyl]-1,3-
 benzothiazol-2-yl]acetamide 1112981-02-8P,
 N-[6-[6-Chloro-5-[(propylsulfonyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-
 yl]acetamide 1112981-03-9P, N-[6-[5-[(Butylsulfonyl)amino]-6-chloro-3-
 pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-04-0P,
 N-[6-[6-Chloro-5-[(1-methylethyl)sulfonyl]amino]-3-pyridinyl]-1,3-
 benzothiazol-2-yl]acetamide 1112981-06-2P,
 N-[6-[6-Chloro-5-[(4-chlorophenyl)sulfonyl]amino]-3-pyridinyl]-1,3-
 benzothiazol-2-yl]acetamide 1112981-07-3P,
 N-[6-[6-Chloro-5-[(phenylsulfonyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-
 yl]acetamide 1112981-08-4P, N-[6-[6-Chloro-5-[(4-
 (difluoromethoxy)phenyl)sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-
 yl]acetamide 1112981-09-5P, N-[6-[6-Chloro-5-[(3-
 fluorophenyl)sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide
 1112981-10-8P, N-[6-[6-Chloro-5-[(3-
 (difluoromethoxy)phenyl)sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-
 yl]acetamide 1112981-11-9P, N-[6-[6-Chloro-5-[(3-
 chlorophenyl)sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide
 1112981-12-0P, N-[6-[6-Chloro-5-[(thiophen-2-yl)sulfonyl]amino]-3-
 pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-13-1P,
 N-[6-[6-Chloro-5-[(thiophen-3-yl)sulfonyl]amino]-3-pyridinyl]-1,3-
 benzothiazol-2-yl]acetamide 1112981-14-2P,
 N-[6-[5-[(Benzylsulfonyl)amino]-6-chloro-3-pyridinyl]-1,3-benzothiazol-2-
 yl]acetamide 1112981-15-3P, N-[6-[6-Chloro-5-[(4-
 methylphenyl)sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide
 1112981-16-4P, N-[6-[6-Chloro-5-[(4-
 (trifluoromethyl)phenyl)sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-
 yl]acetamide 1112981-17-5P, N-[6-[5-[(4-tert-
 Butylphenyl)sulfonyl]amino]-6-chloro-3-pyridinyl]-1,3-benzothiazol-2-
 yl]acetamide 1112981-18-6P, N-[5-(2-Amino-1,3-benzothiazol-6-yl)-2-
 chloro-3-pyridinyl]-4-fluorobenzenesulfonamide 1112981-19-7P,
 N-[6-[6-Chloro-5-[(5-chlorothiophen-2-yl)sulfonyl]amino]-3-pyridinyl]-1,3-
 benzothiazol-2-yl]acetamide 1112981-20-0P,
 N-[6-[5-[(4-Methylphenyl)sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-
 yl]acetamide 1112981-22-2P, N-[6-[5-[(4-Methoxyphenyl)sulfonyl]amino]-3-
 pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-23-3P,
 N-[6-[5-[(4-(Trifluoromethyl)phenyl)sulfonyl]amino]-3-pyridinyl]-1,3-
 benzothiazol-2-yl]acetamide 1112981-24-4P,
 N-[6-[5-[(3-(Trifluoromethyl)phenyl)sulfonyl]amino]-3-pyridinyl]-1,3-
 benzothiazol-2-yl]acetamide 1112981-25-5P,
 N-[6-[5-[(4-Fluorophenyl)sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-
 yl]acetamide 1112981-26-6P, N-[6-[5-[(3-Fluorophenyl)sulfonyl]amino]-3-
 pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-27-7P,
 N-[6-[5-[(3,4-Dichlorophenyl)sulfonyl]amino]-3-pyridinyl]-1,3-
 benzothiazol-2-yl]acetamide 1112981-28-8P,
 N-[6-[5-[(4-tert-Butylphenyl)sulfonyl]amino]-3-pyridinyl]-1,3-
 benzothiazol-2-yl]acetamide 1112981-29-9P,
 N-[6-[5-[(Phenylsulfonyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-
 yl]acetamide 1112981-30-2P, N-[6-[2-[(4-
 Fluorophenyl)sulfonyl](methyl)amino]-4-pyrimidinyl]-1,3-benzothiazol-2-
 yl]acetamide 1112981-31-3P, N-[6-[2-[Methyl[(6-
 quinolinyl)sulfonyl]amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide
 1112981-32-4P, N-[6-[2-[(4-tert-Butylphenyl)sulfonyl](methyl)amino]-4-
 pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-33-5P,
 N-[6-[2-[N-Methyl-N-[(thiophen-2-yl)sulfonyl]amino]-4-pyrimidinyl]-1,3-
 benzothiazol-2-yl]acetamide 1112981-34-6P,
 N-[6-[2-[Methyl[(1-naphthalenyl)sulfonyl]amino]-4-pyrimidinyl]-1,3-
 benzothiazol-2-yl]acetamide 1112981-35-7P,
 N-[6-[2-[(5-Isoquinolinyl)sulfonyl](methyl)amino]-4-pyrimidinyl]-1,3-

benzothiazol-2-yl]acetamide 1112981-36-8P,
 N-[6-[2-[N-Methyl-N-[(thiophen-3-yl)sulfonyl]amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-37-9P,
 N-[6-[2-[(3,4-Dimethylphenyl)sulfonyl](methyl)amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-38-0P,
 N-[6-[2-[Methyl[(1-methyl-1H-imidazol-4-yl)sulfonyl]amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-39-1P,
 N-[6-[2-[(2,4-Dimethylphenyl)sulfonyl](methyl)amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-40-4P,
 N-[6-[2-[Methyl[[4-(trifluoromethyl)phenyl]sulfonyl]amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-42-6P,
 N-[6-[2-[Methyl[(2-naphthalenyl)sulfonyl]amino]-4-pyrimidinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-43-7P,
 N-[6-[2-[Methyl[(4-methylphenyl)sulfonyl]amino]-4-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-44-8P,
 N-[6-[2-[[4-(4-Methylphenyl)sulfonyl]amino]-4-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-45-9P, N-[6-[2-[[4-Methoxyphenyl)sulfonyl]amino]-4-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-46-0P,
 N-[6-[5-[Methyl[[4-(trifluoromethyl)phenyl]sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-47-1P,
 N-[6-[5-[(4-Fluorophenyl)sulfonyl](methyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-48-2P,
 N-[6-[5-[(4-Chlorophenyl)sulfonyl](methyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-49-3P,
 N-[6-[5-[(3,4-Dichlorophenyl)sulfonyl](methyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-50-6P,
 N-[6-[5-[(3,4-Difluorophenyl)sulfonyl](methyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-51-7P,
 N-[6-[5-[(4-tert-Butylphenyl)sulfonyl](methyl)amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-52-8P,
 N-[6-[5-[Methyl(phenyl)sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-53-9P, N-[6-[6-[Methyl[(3-methylphenyl)sulfonyl]amino]-2-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-55-1P, N-[6-[6-[[2-Fluorophenyl)sulfonyl](methyl)amino]-2-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-56-2P,
 N-[6-[6-(tert-Butylamino)-2-pyrazinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-57-3P, N-[5-[5-[[4-(4-Fluorophenyl)sulfonyl]amino]-3-pyridinyl]-[1,3]thiazolo[5,4-b]pyridin-2-yl]acetamide 1112981-58-4P,
 N-[6-[5-[2-(2-Oxo-1-pyrrolidinyl)ethoxy]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-59-5P,
 N-[6-[5-[2-(4-Morpholinyl)ethoxy]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-60-8P, N-[6-[5-[1-Methyl-2-(4-morpholinyl)ethoxy]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-61-9P,
 N-[6-[5-[2-(2-Oxo-1,3-oxazolidin-3-yl)ethoxy]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-62-0P,
 N-[6-[5-[2-(1-Piperidinyl)ethoxy]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-63-1P, N-[6-[5-[2-(1-Azepanyl)ethoxy]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-64-2P,
 N-[6-[6-Chloro-5-(tetrahydro-3-furanyloxy)-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-65-3P, N-[6-[6-Chloro-5-(1-methylethoxy)-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-66-4P,
 N-[6-[6-Chloro-5-(((3S)-tetrahydrofuran-3-yl)oxy)-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-67-5P,
 N-[6-[6-Bromo-5-methoxy-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-69-7P, N-[6-[6-Chloro-5-fluoro-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-70-0P, N-[6-[6-Chloro-5-ethoxy-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-71-1P,
 N-[6-[6-Chloro-5-methoxy-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-72-2P, N-[6-[4-Methoxy-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-73-3P, N-[6-[6-Methoxy-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-74-4P,
 N-[6-[6-Ethoxy-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of 2-aminobenzothiazole derivs. as PI3 kinase modulators)

IT 1112981-75-5P, N-[6-(6-Methoxy-4-methyl-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112981-76-6P, N-[6-(4-Methyl-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112981-77-7P, N-[6-(6-Chloro-4-methoxy-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112981-78-8P, N-[6-(6-Chloro-5-(difluoromethoxy)-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112981-79-9P, N-[6-(4-(Difluoromethoxy)-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112981-80-2P, N-[6-(6-(Difluoromethoxy)-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112981-81-3P, N-[6-(6-(Difluoromethoxy)-4-methyl-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112981-82-4P, N-[6-(4-(Hydroxymethyl)-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112981-83-5P, N-[6-(5-[2-(3,3-Dimethyl-2-oxo-1-pyrrolidinyl)ethoxy]-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112981-84-6P, N-[6-(5-[2-(3-Methyl-2-oxo-1-pyrrolidinyl)ethoxy]-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112981-86-8P, N-[6-(5-[2-(3,3-Difluoro-2-oxo-1-pyrrolidinyl)ethoxy]-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112981-87-9P, N-[6-(5-[2-(3-Fluoro-2-oxo-1-pyrrolidinyl)ethoxy]-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112981-88-0P, N-[6-(6-Chloro-5-[[4-(1-hydroxyethyl)phenyl]sulfonyl]amino)-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-89-1P, N-[6-(5-[[4-(1-Hydroxyethyl)phenyl]sulfonyl]amino)-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-90-4P, N-[6-(3-[[4-Methoxyphenyl]sulfonyl]amino)phenyl]-1,3-benzothiazol-2-yl]acetamide 1112981-91-5P, N-[6-(2-[(Tetrahydro-2H-pyran-4-yl)amino]-4-pyrimidinyl)-1,3-benzothiazol-2-yl]acetamide 1112981-92-6P, N-[6-(2-[(2R)-2-(2-Methylphenyl)-1-pyrrolidinyl]-4-pyrimidinyl)-1,3-benzothiazol-2-yl]acetamide 1112981-93-7P, N-[6-(2-(1-Piperidinyl)-4-pyrimidinyl)-1,3-benzothiazol-2-yl]acetamide 1112981-94-8P, N-[6-(2-[(2-Pyridinyl)amino]-4-pyrimidinyl)-1,3-benzothiazol-2-yl]acetamide 1112981-95-9P, N-[6-(2-[(1-Piperidinyl)amino]-4-pyrimidinyl)-1,3-benzothiazol-2-yl]acetamide 1112981-96-0P, N-[6-(2-[(2R)-2-Phenyl-1-pyrrolidinyl)-4-pyrimidinyl)-1,3-benzothiazol-2-yl]acetamide 1112981-97-1P, N-[6-(6-Cyano-5-[[4-methoxyphenyl]sulfonyl]amino)-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112981-98-2P, N-[6-(5-Amino-6-cyano-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112982-00-9P, Phenyl [6-(6-chloro-5-(dimethylamino)-3-pyridinyl)-1,3-benzothiazol-2-yl]carbamate 1112982-01-0P, N-[6-(6-Chloro-5-(dimethylamino)-3-pyridinyl)-1,3-benzothiazol-2-yl]-2-methoxyacetamide 1112982-02-1P, N-[6-(6-Chloro-5-(dimethylamino)-3-pyridinyl)-1,3-benzothiazol-2-yl]-2-phenoxyacetamide 1112982-03-2P, N-[6-(6-Chloro-5-(dimethylamino)-3-pyridinyl)-1,3-benzothiazol-2-yl]-N'-[2-(4-morpholinyl)ethyl]urea 1112982-04-3P, 6-[6-Chloro-5-(dimethylamino)-3-pyridinyl]-1,3-benzothiazol-2-amine 1112982-05-4P, N-[6-(6-Chloro-5-(dimethylamino)-3-pyridinyl)-1,3-benzothiazol-2-yl]-N',N'-dimethylglycinamide 1112982-06-5P, N-[6-(6-Chloro-5-(dimethylamino)-3-pyridinyl)-1,3-benzothiazol-2-yl]methanesulfonamide 1112982-07-6P, tert-Butyl N-(tert-butoxycarbonyl)-N-[5-[2-(acetyl)amino]-1,3-benzothiazol-6-yl]-2-chloro-3-pyridinyl]carbamate 1112982-08-7P, N-[6-(5-(Cyanomethoxy)-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112982-10-1P, N-[6-(5-Fluoro-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112982-11-2P, N-[6-(6-Chloro-5-(1-cyanoethoxy)-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112982-12-3P, N-[6-(2-Chloro-5-(1-cyanoethoxy)-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112982-13-4P, N-[6-(6-Chloro-5-[2-methoxyethoxy]methoxy)-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112982-14-5P,

N-[6-[5-[(2-Methoxyethoxy)methoxy]-6-(trifluoromethyl)-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112982-15-6P,
 N-[6-[5-[(2R)-5-Oxo-2-pyrrolidinyl)methoxy]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112982-16-7P, N-[6-[5-[(1-Aminocyclopropyl)methoxy]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112982-17-8P,
 N-[6-(5-Hydroxy-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112982-18-9P, N-[6-(6-Chloro-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112982-19-0P, N-[2-[5-(2-(Acetylamino)-1,3-benzothiazol-6-yl)-3-pyridinyl]oxy]ethyl-2-methoxyacetamide 1112982-20-3P,
 N-[6-[6-(3-Azabicyclo[3.2.2]nonan-3-yl)-2-pyrazinyl]-1,3-benzothiazol-2-yl]acetamide 1112982-21-4P, N-[6-(6-Chloro-5-hydroxy-3-pyridinyl)-1,3-benzothiazol-2-yl]acetamide 1112982-22-5P,
 N-[6-[5-Hydroxy-6-(trifluoromethyl)-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112982-24-7P, 5-[2-(Acetylamino)-1,3-benzothiazol-6-yl]-2-chloropyridin-3-yl acetate 1112982-25-8P,
 N-[6-[6-Chloro-5-[(4-methoxyphenyl)sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]cyclohexanecarboxamide 1112982-26-9P,
 N-[2-Chloro-5-[2-[(1-methylethyl)amino]-1,3-benzothiazol-6-yl]-3-pyridinyl]-4-methoxybenzenesulfonamide 1112982-27-0P,
 N-[2-Chloro-5-[2-[(cyclohexylmethyl)amino]-1,3-benzothiazol-6-yl]-3-pyridinyl]-4-methoxybenzenesulfonamide 1112982-28-1P,
 N-[5-(2-Amino-1,3-benzothiazol-6-yl)-2-chloro-3-pyridinyl]-3-(difluoromethoxy)benzenesulfonamide 1112982-29-2P,
 N-[5-(2-Amino-1,3-benzothiazol-6-yl)-2-chloro-3-pyridinyl]-2-chloro-4-(trifluoromethyl)benzenesulfonamide 1112982-30-5P,
 N-[5-(2-Amino-1,3-benzothiazol-6-yl)-2-chloro-3-pyridinyl]-2-chloro-4-fluorobenzenesulfonamide 1112982-31-6P,
 N-[5-(2-Amino-1,3-benzothiazol-6-yl)-2-chloro-3-pyridinyl]-2,4-dichlorobenzenesulfonamide 1112982-32-7P,
 N-[5-(2-Amino-1,3-benzothiazol-6-yl)-2-chloro-3-pyridinyl]-2,4-difluorobenzenesulfonamide 1112982-33-8P,
 N-[5-(2-Amino-1,3-benzothiazol-6-yl)-2-chloro-3-pyridinyl]-4-fluoro-2-methylbenzenesulfonamide 1112982-34-9P,
 N-[5-(2-Amino-1,3-benzothiazol-6-yl)-2-chloro-3-pyridinyl]-4-chloro-2-fluorobenzenesulfonamide 1112982-35-0P,
 N-[5-(2-Amino-1,3-benzothiazol-6-yl)-2-chloro-3-pyridinyl]-2-(trifluoromethyl)benzenesulfonamide 1112982-36-1P,
 6-[5-(tert-Butylamino)-6-chloro-3-pyridinyl]-1,3-benzothiazol-2-amine 1112982-37-2P, N-[6-[6-Chloro-5-[(1-piperidinyl)sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-yl]acetamide 1112982-38-3P,
 N-[2-Chloro-5-[2-(methylamino)-1,3-benzothiazol-6-yl]-3-pyridinyl]-4-fluorobenzenesulfonamide 1112982-39-4P,
 2-Chloro-N-[2-chloro-5-[2-(methylamino)-1,3-benzothiazol-6-yl]-3-pyridinyl]-6-methylbenzenesulfonamide 1112982-40-7P,
 2,6-Dichloro-N-[2-chloro-5-[2-(methylamino)-1,3-benzothiazol-6-yl]-3-pyridinyl]benzenesulfonamide 1112982-41-8P,
 N-[2-Chloro-5-[2-(methylamino)-1,3-benzothiazol-6-yl]-3-pyridinyl]-2-fluorobenzenesulfonamide 1112982-42-9P,
 4-Acetyl-N-[2-chloro-5-[2-(methylamino)-1,3-benzothiazol-6-yl]-3-pyridinyl]benzenesulfonamide 1112982-43-0P,
 N-[1-[4-[(2-Chloro-5-[2-(methylamino)-1,3-benzothiazol-6-yl]-3-pyridinyl)sulfamoyl]phenyl]-1-methylethyl]acetamide 1112982-44-1P,
 N-[1-[4-[(5-(2-Amino-1,3-benzothiazol-6-yl)-2-chloro-3-pyridinyl)sulfamoyl]phenyl]-1-methylethyl]acetamide 1112982-45-2P,
 N-[5-(2-Amino-1,3-benzothiazol-6-yl)-2-chloro-3-pyridinyl]-4-(1-hydroxy-1-methylethyl)benzenesulfonamide 1112982-46-3P,
 4-Acetyl-N-[5-(2-amino-1,3-benzothiazol-6-yl)-2-chloro-3-pyridinyl]benzenesulfonamide 1112982-47-4P,
 N-[5-(1,3-Benzoxazol-6-yl)-2-chloro-3-pyridinyl]-4-fluorobenzenesulfonamide 1112982-48-5P,
 N-[2-Chloro-5-[2-(methylsulfanyl)-1,3-benzothiazol-6-yl]-3-pyridinyl]-4-methoxybenzenesulfonamide 1112982-51-0P,

1-[5-(1,3-Benzothiazol-6-yl)-3-pyridinyl]ethanone 1112982-52-1P,
6-Fluoro-5-(2-methyl-1,3-benzothiazol-6-yl)-2-(trifluoromethyl)-3-
pyridinol 1112982-53-2P, N-[6-[6-Chloro-5-[[[4-(1S)-1-
hydroxyethyl]phenyl]sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-
yl]acetamide 1112982-54-3P, N-[6-[6-Chloro-5-[[[4-(1R)-1-
hydroxyethyl]phenyl]sulfonyl]amino]-3-pyridinyl]-1,3-benzothiazol-2-
yl]acetamide 1112982-55-4P, N-[6-[6-(2-Fluorophenylsulfonyl)pyridin-2-
yl]-1,3-benzothiazol-2-yl]acetamide 1112982-67-8P,
N-[6-(3-Fluoro-4-methoxyphenyl)-1,3-benzothiazol-2-yl]acetamide
1112982-96-3P, N-[5-[5-[[[4-Fluorophenyl]sulfonyl]amino]pyridin-3-
yl]thiazolo[5,4-b]pyridin-2-yl]acetamide trifluoroacetate 1112982-99-6P,
N-[6-[2-[2-(o-Tolyl)pyrrolidin-1-yl]pyrimidin-4-yl]-1,3-benzothiazol-2-
yl]acetamide 1112983-00-2P, N-[6-[2-(2-Phenylpyrrolidin-1-yl)pyrimidin-4-
yl]-1,3-benzothiazol-2-yl]acetamide
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)
(preparation of 2-aminobenzothiazole derivs. as PI3 kinase modulators)
IT 110-89-4, Piperidine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of 2-aminobenzothiazole derivs. as PI3 kinase modulators)
IT 1112980-26-3P, N-[6-(2-Chloro-4-pyrimidinyl)-1,3-benzothiazol-2-
yl]acetamide 1112980-73-0P, N-[6-(6-Chloro-2-pyrazinyl)-1,3-benzothiazol-
2-yl]acetamide 1112980-90-1P, tert-Butyl
[6-[5-[[[4-methylphenyl]sulfonyl]amino]-1,3,4-oxadiazol-2-yl]-1,3-
benzothiazol-2-yl]carbamate 1112980-93-4P, tert-Butyl
[6-[5-(benzyl)amino]-1,3,4-oxadiazol-2-yl]-1,3-benzothiazol-2-
yl]carbamate 1112981-99-3P, N-[6-[6-Chloro-5-(dimethylamino)-3-
pyridinyl]-1,3-benzothiazol-2-yl]acetamide
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic
preparation); THU (Therapeutic use); BIOL (Biological study); PREP
(Preparation); RACT (Reactant or reagent); USES (Uses)
(reactant; preparation of 2-aminobenzothiazole derivs. as PI3 kinase
modulators)
IT 50-00-0, Formaldehyde, reactions 67-64-1, Acetone, reactions 70-55-3,
4-Methylbenzenesulfonamide 74-89-5, Methylamine, reactions 75-04-7,
Ethylamine, reactions 75-16-1, Methylmagnesium bromide 75-31-0,
2-Propanamine, reactions 75-64-9, 2-Methylpropan-2-amine, reactions
98-09-9, Benzenesulfonyl chloride 98-10-2, Benzenesulfonamide 98-59-9,
4-Methylbenzene-1-sulfonyl chloride 98-60-2 98-68-0 98-89-5,
Cyclohexanecarboxylic acid 105-53-3, Diethyl malonate 107-14-2,
2-Chloroacetonitrile 108-01-0, 2-(Dimethylamino)
ethanol 108-21-4, Isopropyl acetate 108-24-7, Acetic anhydride
124-63-0, Methanesulfonyl chloride 283-24-9, 3-Azabicyclo[3.2.2]nonane
349-88-2, 4-Fluorobenzenesulfonyl chloride 371-42-6,
4-Fluorobenzenethiol 407-20-5, 3-Bromo-5-fluoropyridine 504-29-0,
2-Pyridinamine 585-32-0, Cumylamine 592-84-7, n-Butyl formate
622-78-6, Benzyl isothiocyanate 640-61-9, N-Methyl-p-toluenesulfonamide
696-63-9, 4-Methoxybenzenethiol 701-99-5 771-61-9,
2,3,4,5,6-Pentafluorophenol 925-90-6, Ethylmagnesium bromide
1006-64-0, 2-Phenylpyrrolidine 1118-68-9, 2-(Dimethylamino)acetic acid
1617-17-0, 2-Chloropropanenitrile 1885-14-9, Phenyl chloroformate
1899-93-0, m-Toluenesulfonyl chloride 2038-03-1, 4-Morpholineethanamine
2038-57-5, 3-Phenylpropylamine 2213-43-6, 1-Piperidinamine 2290-65-5,
Trimethylsilyl isothiocyanate 2402-78-0, 2,6-Dichloropyridine
2557-78-0, 2-Fluorobenzenethiol 2859-67-8, 3-(Pyridin-3-yl)-1-propanol
2905-21-7 2991-42-6, 4-(Trifluoromethyl)benzene-1-sulfonyl chloride
3218-02-8, Cyclohexylmethanamine 3445-11-2,
1-(2-Hydroxyethyl)pyrrolidin-2-one 3934-20-1, 2,4-Dichloropyrimidine
3970-21-6, 2-Methoxyethoxymethyl chloride 4175-77-3, 2,4-Dibromothiazole
4837-38-1, Cyclohexanesulfonyl chloride 5600-21-5,
4-Chloro-6-methylpyrimidin-2-amine 5720-07-0, 4-Methoxyphenylboronic

acid 7087-68-5, N-Ethyl-N-isopropylpropan-2-amine 13250-46-9, Acetyl
isothiocyanate 13355-01-8 16133-25-8, 3-Pyridinesulfonyl chloride
16179-97-8, 2-Pyridylacetic acid hydrochloride 19798-81-3,
6-Bromopyridin-2-amine 21327-14-0, N-(3-Bromophenyl)thiourea
30418-59-8, 3-Aminophenylboronic acid 31784-72-2,
N-(5-Chlorothiazolo[5,4-b]pyridin-2-yl)acetamide 38041-19-9,
4-Aminotetrahydro-2H-pyran 38870-89-2, 2-Methoxyacetyl chloride
38940-62-4 39856-57-0, 2,6-Dibromopyridin-3-amine 45644-21-1,
6-Chloropyridin-2-amine 55758-32-2, 2-Fluoro-5-hydroxypyridine
62673-31-8, Benzylzinc bromide 66673-40-3,
(R)-(-)-5-(Hydroxymethyl)-2-pyrrolidinone 67443-38-3,
5-Bromo-2-chloro-3-nitropyridine 67567-26-4,
4-Bromo-2,6-difluorobenzenamine 68867-20-9,
6-Iodo-2-methylbenzo[d]thiazole 73183-34-3,
4,4,5,5-Tetramethyl-2-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-1,3,2-
dioxaborolane 73443-85-3, 4-Bromobenzo[d]thiazol-2(3H)-one 73583-37-6,
4-Bromo-2-chloropyridine 74115-13-2, 5-Bromopyridin-3-ol 80945-86-4,
6-Bromo-2-chlorobenzo[d]thiazole 129540-23-4, 2-(o-Tolyl)pyrrolidine
130115-85-4, 3-Bromo-2-chloropyridin-5-ol 149507-26-6,
3-Fluoro-4-methoxyphenylboronic acid 153034-86-7,
2-Chloro-4-iodopyridine 175205-54-6,
2-Chloro-4-(trifluoromethyl)benzene-1-sulfonyl chloride 186407-74-9
225525-50-8, 2-(tert-Butoxycarbonylamino)-4-benzothiazole-6-carboxylic
acid 286946-77-8, 5-Bromo-2-chloropyridin-3-ol 351003-38-8,
3-(Difluoromethoxy)benzenesulfonyl chloride 375369-14-5,
6-Bromobenzo[d]oxazole 474966-97-7,
6-Bromo-2-(methylthio)-1,3-benzothiazole 573675-27-1,
3-Amino-5-bromopicolinonitrile 588729-99-1,
5-Bromo-2-chloropyridin-3-amine 796061-08-0,
4-Methyl-N-[3-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-
yl)phenyl]benzenesulfonamide 887309-87-7,
N-(5-Bromo-2-chloropyridin-3-yl)-4-fluorobenzenesulfonamide
1112982-58-7, 5-Bromo-2-(4-methoxyphenylsulfonyl)thiazole 1112982-60-1,
2-Chloro-6-(4-fluorophenylthio)pyridine 1112982-64-5,
N-[6-(4,4,5,5-Tetramethyl-1,3-dioxolan-2-yl)-1,3-benzothiazol-2-
yl]acetamide 1112982-78-1, 4-Acetyl-N-(5-bromo-2-chloropyridin-3-
yl)benzenesulfonamide 1112982-95-2,
(2-Acetamido-1,3-benzothiazol-6-yl)boronic acid 1112982-97-4,
N-(5-Bromopyridin-3-yl)-4-(1-hydroxyethyl)benzenesulfonamide
1112982-98-5, N-[6-(3-Aminophenyl)-1,3-benzothiazol-2-yl]acetamide
1112983-01-3, N-(5-Bromo-2-cyanopyridin-3-yl)-4-methoxybenzenesulfonamide
1112983-04-6, tert-Butyl N-(tert-butoxycarbonyl)-N-(5-bromo-2-
chloropyridin-3-yl)carbamate 1112983-30-8,
N-(5-Bromo-2-chloropyridin-3-yl)-2-chloro-6-methylbenzenesulfonamide
1112983-32-0, N-[2-Chloro-5-(3,3,4,4-tetramethylborolan-1-yl)pyridin-3-yl]-
4-methoxybenzenesulfonamide 1113041-97-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; preparation of 2-aminobenzothiazole derivs. as PI3 kinase
modulators)

L9 ANSWER 2 OF 55 CAPLUS COPYRIGHT 2009 ACS ON STN

AN 2009:49442 CAPLUS

DN 150:120715

ED Entered STN: 15 Jan 2009

TI Use of a creatine-containing composition for improvement of memory
function including long-term memory and for prevention of mental fatigue.

IN Gastner, Thomas; Selzer, Frauke; Krimmer, Hans-Peter; Hammer, Benedikt

PA Alzchem Trostberg GmbH, Germany

SO Ger. Offen., l1pp.

CODEN: GWXXBX

DT Patent

LA German

CC 18-2 (Animal Nutrition)
Section cross-reference(s): 17, 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 102007030495	A1	20090115	DE 2007-102007030495	20070630
PRAI	DE 2007-102007030495		20070630		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 102007030495	IPCI	A23L0001-30 [I,A]; A61K0031-198 [I,A]; A61K0031-185 [I,C*]; A61P0025-28 [N,A]; A61P0025-00 [N,C*]

AB Described is the use of a solid or aqueous preparation containing creatine components

for improvement of memory function, memory retention, long-term memory and for preventing memory fatigue. The preparation contains at least one addnl. component from the group: Ginkgo biloba, ginseng, taiga root, yam root, lecithin, choline, phosphatidylserine, dimethylamino ethanol, acetylcholine, acetyl-L-carnitine, glutathione, glutamine, cysteine, vitamin A, vitamin E, vitamin B1, vitamin B2, vitamin B6, vitamin B12, vitamin E, niacin, biotin, folic acid, pantothenic acid, zinc, manganese, selenium, magnesium, coenzyme Q10, glucose, colostrum, synephrine, octopamine, caffeine, theophylline, α -linoleic acid, eicosapentaenoic acid, omega-3 fatty acids, piracetam, aniracetam, memantine, pyritinol, gallamine, vinpocetine and pangamic acid. The applied components behave here synergistically. Furthermore, the inventive prepn. have excellent organoleptic characteristics and a very high bioavailability. Due to these special advantages, the inventive prepn. are superbly suitable as food supplements, functional foods and animal feed additives.

ST brain function memory feed food additive nutraceutical creatine nutrient

IT Natural products, pharmaceutical

(GinSeng; use of a creatine-containing composition for improvement of memory function including long-term memory and for prevention of mental fatigue)

IT Brain

(function of; use of a creatine-containing composition for improvement of memory function including long-term memory and for prevention of mental fatigue)

IT Ginkgo biloba

(leaves; use of a creatine-containing composition for improvement of memory function including long-term memory and for prevention of mental fatigue)

IT Memory, biological

(long-term, improvement of; use of a creatine-containing composition for improvement of memory function including long-term memory and for prevention of mental fatigue)

IT Fatigue, biological

(memory; use of a creatine-containing composition for improvement of memory function including long-term memory and for prevention of mental fatigue)

IT Acids, biological studies

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(organic; use of a creatine-containing composition for improvement of memory function including long-term memory and for prevention of mental fatigue)

IT Fatty acids, biological studies

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyunsatd., omega-3; use of a creatine-containing composition for improvement

- of memory function including long-term memory and for prevention of mental fatigue)
- IT Amnesia
 - (prevention of; use of a creatine-containing composition for improvement of memory function including long-term memory and for prevention of mental fatigue)
- IT Acanthopanax senticosus
 - (root; use of a creatine-containing composition for improvement of memory function including long-term memory and for prevention of mental fatigue)
- IT Bioavailability
 - Colostrum
 - Dietary supplements
 - Dioscorea
 - Feed additives
 - Flavor
 - Food additives
 - Food functional properties
 - Fruit and vegetable juices
 - Human
 - Memory, biological
 - Whey
 - Yam
 - (use of a creatine-containing composition for improvement of memory function including long-term memory and for prevention of mental fatigue)
- IT Amino acids, biological studies
 - Bicarbonates
 - Carbohydrates, biological studies
 - Carbonates, biological studies
 - Fats and Glyceridic oils, biological studies
 - Lecithins
 - Mineral elements, biological studies
 - Phosphatidylserines
 - Proteins
 - Trace element nutrients
 - Vitamins
 - RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 - (use of a creatine-containing composition for improvement of memory function including long-term memory and for prevention of mental fatigue)
- IT Milk preparations
 - (yogurt; use of a creatine-containing composition for improvement of memory function including long-term memory and for prevention of mental fatigue)
- IT 50-81-7D, Ascorbic acid, complexes and compds. with creatine 50-99-7, Glucose, biological studies 51-84-3, Acetylcholine, biological studies 52-90-4, L-Cysteine, biological studies 56-84-8D, L-Aspartic acid, complexes and compds. with creatine 56-85-9, Glutamine, biological studies 57-00-1, Creatine 57-00-1D, Creatine, esters 58-08-2, Caffeine, biological studies 58-55-9, Theophylline, biological studies 58-85-5, Biotin 59-30-3, Folic acid, biological studies 59-43-8, Thiamin, biological studies 59-67-6, Niacin, biological studies 59-67-6D, Nicotinic acid, complexes and compds. with creatine 62-49-7, Choline 62-49-7D, Choline, complexes and compds. with creatine 63-68-3D, Methionine, complexes and compds. with creatine 64-18-6D, Formic acid, complexes and compds. with creatine 64-19-7D, Acetic acid, complexes and compds. with creatine 67-48-1, Choline chloride 68-19-9, Vitamin B12 70-18-8, Glutathione, biological studies 77-92-9D, Citric acid, complexes and compds. with creatine 79-83-4, Pantothenic acid 83-88-5, Riboflavin, biological studies 94-07-5, Synephrin 98-79-3D, Pyroglutamic acid, complexes and compds. with creatine 104-14-3, Octopamine 107-35-7D, Taurine, complexes and

compds. with creatine 107-43-7D, Betaine, complexes and compds. with creatine 108-01-0, Dimethylaminoethanol 110-15-6D, Succinic acid, complexes and compds. with creatine 110-16-7D, Maleic acid, complexes and compds. with creatine 110-17-8D, Fumaric acid, complexes and compds. with creatine 127-17-3D, Pyruvic acid, complexes and compds. with creatine 144-62-7D, Oxalic acid, complexes and compds. with creatine 303-98-0, Coenzyme Q10 328-50-7D, α -Ketoglutaric acid, complexes and compds. with creatine 352-97-6, Guanidinoacetic acid 357-70-0, Galantamine 463-40-1, α -Linolenic acid 526-95-4D, D-Gluconic acid, complexes and compds. with creatine 541-15-1D, L-Carnitine, complexes and compds. with creatine 1098-97-1, Pyritinol 1406-18-4, Vitamin E 3040-38-8, Acetylcarnitine 3040-38-8D, Acetyl-L-carnitine, complexes and compds. with creatine 4468-02-4, Zinc gluconate 6020-87-7, Creatine monohydrate 6903-79-3, Creatinol-O-phosphate 6915-15-7D, Malic acid, complexes and compds. with creatine 7439-95-4, Magnesium, biological studies 7439-96-5, Manganese, biological studies 7440-66-6, Zinc, biological studies 7440-66-6D, Zinc, salts 7491-74-9, Piracetam 7647-01-0D, Hydrochloric acid, complexes and compds. with creatine 7664-38-2D, Phosphoric acid, complexes and compds. with creatine 7664-93-9D, Sulfuric acid, complexes and compds. with creatine 7782-49-2, Selenium, biological studies 8059-24-3, Vitamin B6 10024-66-5, Manganese citrate 10417-94-4, Eicosapentaenoic acid 11006-56-7, Pangamic acid 11103-57-4, Vitamin A 13429-32-8, Creatinol 15366-32-2 19982-08-2, Memantine 42971-09-5, Vinpocetine 72432-10-1, Aniracetam

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(use of a creatine-containing composition for improvement of memory function including long-term memory and for prevention of mental fatigue)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Anon; WO 02071874 A2 CAPLUS
- (2) Anon; DE 10340740 A1 CAPLUS
- (3) Anon; EP 1275399 A2 CAPLUS
- (4) Anon; US 20060014773 A1 CAPLUS
- (5) Anon; US 20060128643 A1 CAPLUS
- (6) Anon; US 20060257502 A1 CAPLUS
- (7) Kidd, P; Altern Med Rev 1999, V4(3), PS144
- (8) McDaniel; Psychol Sci Publ Interes 2002, V3, PS12

L9 ANSWER 3 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2009:20231 CAPLUS

DN 150:121675

ED Entered STN: 08 Jan 2009

TI Pyrimidine-4-carboxamide compounds useful as Raf kinase inhibitors and their preparation and use in the treatment of Raf-mediated diseases

IN Chen, Weirong; Cossrow, Jennier; Franklin, Liyod; Guan, Bing; Jones, John Howard; Kumaravel, Gnanasambandam; Lane, Benjamin; Littke, Adam; Lugovskoy, Alexey; Peng, Hairuo; Powell, Noel; Raimundo, Brian; Tanaka, Hiroko; Vessels, Jeffrey; Wynn, Thomas; Xin, Zhili

PA Sunesis Pharmaceuticals, Inc., USA

SO PCT Int. Appl., 271pp.

CODEN: PIXXD2

DT Patent

LA English

CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 1, 63

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2009006389	A2	20090108	WO 2008-US68762	20080630
W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,				

CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES,
 FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE,
 KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,
 ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH,
 PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM,
 TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU,
 IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK,
 TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
 TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
 AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

US 20090036419

A1

20090205

US 2008-164762

20080630

PRAI US 2007-947291P

P

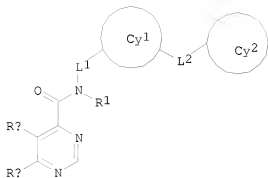
20070629

CLASS

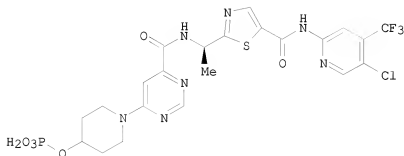
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2009006389	IPCI	C07D0417-14 [I,A]; C07D0417-12 [I,A]; C07D0417-00 [I,C*]; C07D0413-14 [I,A]; C07D0413-00 [I,C*]; C07D0471-04 [I,A]; C07D0471-00 [I,C*]; C07D0487-04 [I,A]; C07D0487-00 [I,C*]; C07D0401-14 [I,A]; C07D0403-12 [I,A]; C07D0403-00 [I,C*]; C07D0401-12 [I,A]; C07D0401-00 [I,C*]; C07D0473-00 [I,A]; A61K0031-506 [I,A]; A61P0035-00 [I,A]
US 20090036419	IPCI	A61K0031-397 [I,A]; C07D0239-24 [I,A]; C07D0239-00 [I,C*]; A61K0031-505 [I,A]; C07D0295-00 [I,A]; C07D0473-00 [I,A]; C12N0009-99 [I,A]; A61P0009-00 [I,A]; A61P0037-02 [I,A]; A61P0037-00 [I,C*]; A61P0031-12 [I,A]; A61P0031-00 [I,C*]; A61P0019-08 [I,A]; A61P0019-00 [I,C*]; A61P0029-00 [I,A]; A61P0025-00 [I,A]; A61P0035-00 [I,A]; A61K0031-52 [I,A]; A61K0031-519 [I,C*]; A61K0031-5377 [I,A]; A61K0031-5375 [I,C*]; A61K0031-496 [I,A]; A61K0031-502 [I,A]
	NCL	514/210.200; 544/333.000; 514/256.000; 544/122.000; 514/235.800; 514/252.140; 514/249.000; 544/264.000; 514/263.210; 435/184.000

OS MARPAT 150:121675

GI



I



II

- AB The invention provides compds. of formula I which are useful as inhibitors of Raf protein kinase. The invention also provides compns. thereof, and methods of treating Raf-mediated diseases. Compds. of formula I wherein Cy1 is (un)substituted Ph, (un)substituted 5- to 6-membered (un)saturated heterocyclic ring and (un)substituted 5- to 6-membered aromatic heterocyclic ring; Cy2 is (un)substituted 5- to 14-membered (un)saturated or aromatic (mono/bi/tri)cyclic ring containing 0 - 4 heteroatoms; L1 is a bond and (un)substituted (un)branched C1-6 alkylene chain; L2 is a bond and (un)substituted (un)branched C1-6 (hetero)alkylene; R1 is H and (un)substituted C1-6 aliphatic; Rx and Rm are independently halo, CN, OH and derivs. SH and derivs., NH2 and derivs., etc.; and pharmaceutically acceptable salts thereof, are claimed. Example compound II was prepared by a general procedure (procedure given). All the invention compds. were evaluated for their Raf-kinase inhibitory activity (some data given).
- ST pyrimidinecarboxamide prepn Raf kinase inhibitor treatment disease
- IT Transplant and Transplantation
 (- associated diseases, treatment of; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)
- IT Disease, animal
 (Raf-mediated, treatment of; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)
- IT Bone, disease
 (agents for treatment of destructive, codrugs; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)
- IT Blood, disease
 Liver, disease
 (agents for treatment of, codrugs; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)
- IT Carcinoma
 Cervix, neoplasm

(cervical carcinoma, treatment of; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT Anti-inflammatory agents
 Antidiabetic agents
 Antiviral agents
 Cardiovascular agents
 Cytotoxic agents
 Immunostimulants
 (codrugs; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT Neurotrophic factors
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (codrugs; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT Intestine, neoplasm
 (colon, treatment of; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT Nervous system, disease
 (degeneration, treatment of; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT Nerve, neoplasm
 (neuroblastoma, treatment of; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT Thyroid gland, neoplasm
 (papillary, treatment of; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT Antitumor agents
 Combination chemotherapy
 Human
 Immunomodulators
 Mammalia
 Nervous system agents
 Neuroprotective agents
 Pharmaceutical carriers
 (preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT Disease, animal
 (proliferative, treatment of; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT Autoimmune disease
 Bladder, neoplasm
 Blood, disease
 Bone, disease
 Bone, neoplasm
 Brain, neoplasm
 Cardiovascular system, disease
 Cervix, neoplasm
 Diabetes mellitus
 Heart, disease
 Immune disease
 Immunodeficiency
 Inflammation
 Kidney, neoplasm
 Larynx, neoplasm
 Leukemia
 Liver, disease
 Lung, neoplasm
 Lymphatic system, neoplasm
 Lymphoma
 Mammary gland, neoplasm

Melanoma
 Neuroglia, neoplasm
 Ovary, neoplasm
 Pancreas, neoplasm
 Prostate gland, neoplasm
 Stomach, neoplasm
 Urogenital system, neoplasm
 Viral infection

(treatment of; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT 1097248-99-1P 1097249-03-0P 1097249-09-6P 1097249-11-0P
 1097249-14-3P 1097249-52-9P 1097249-54-1P 1097249-66-5P
 1097250-07-1P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(drug candidate and intermediate; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT 1096709-80-6P 1096709-86-2P 1096709-87-3P 1096709-88-4P
 1096709-91-9P 1096709-94-2P 1096709-98-6P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(drug candidate; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT 1096360-15-4P 1096361-02-2P 1096361-82-8P 1096361-86-2P
 1096361-90-8P 1096361-92-0P 1096362-69-4P 1096363-93-7P
 1096363-94-8P 1096363-96-0P 1096364-02-1P 1096364-05-4P
 1096364-06-5P 1096364-07-6P 1096364-08-7P 1096364-09-8P
 1096364-10-1P 1096364-15-6P 1096364-17-8P 1096364-19-0P
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 1096707-60-6P 1096707-61-7P 1096707-62-8P 1096707-63-9P
 1096707-64-0P 1096707-65-1P 1096707-66-2P 1096707-67-3P
 1096707-68-4P 1096707-69-5P 1096707-70-8P 1096707-71-9P
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 1096708-73-4P 1096708-75-6P 1096708-77-8P 1096708-79-0P
 1096708-80-3P 1096708-81-4P 1096708-82-5P 1096708-83-6P
 1096708-84-7P 1096708-85-8P 1096708-86-9P 1096708-87-0P
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 1096708-92-7P 1096708-93-8P 1096708-94-9P 1096708-95-0P
 1096708-96-1P 1096708-97-2P 1096708-98-3P 1096708-99-4P

1096709-00-0P	1096709-01-1P	1096709-02-2P	1096709-03-3P
1096709-04-4P	1096709-05-5P	1096709-06-6P	1096709-07-7P
1096709-08-8P	1096709-09-9P	1096709-10-2P	1096709-12-4P
1096709-14-6P	1096709-15-7P	1096709-17-9P	1096709-19-1P
1096709-21-5P	1096709-23-7P	1096709-24-8P	1096709-25-9P
1096709-27-1P	1096709-29-3P	1096709-31-7P	1096709-32-8P
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1096709-39-5P	1096709-40-8P	1096709-42-0P	1096709-43-1P
1096709-44-2P	1096709-45-3P	1096709-46-4P	1096709-47-5P
1096709-48-6P	1096709-49-7P	1096709-50-0P	1096709-51-1P
1096709-52-2P	1096709-53-3P	1096709-54-4P	1096709-55-5P
1096709-56-6P	1096709-57-7P	1096709-58-8P	1096709-59-9P
1096709-60-2P	1096709-61-3P	1096709-62-4P	1096709-63-5P
1096709-64-6P	1096709-65-7P	1096709-66-8P	1096709-67-9P
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1096709-72-6P	1096709-73-7P	1096709-74-8P	1096709-75-9P
1096709-76-0P	1096709-77-1P	1096709-78-2P	1096709-79-3P
1096709-81-7P	1096709-82-8P	1096709-83-9P	1096709-84-0P
1096709-85-1P	1096709-89-5P	1096709-90-8P	1096709-92-0P
1096709-93-1P	1096709-95-3P	1096709-96-4P	1096709-97-5P
1096709-99-7P	1096710-00-7P	1096710-01-8P	1096710-02-9P
1096710-03-0P	1096710-04-1P	1096710-05-2P	1096710-06-3P
1096710-07-4P	1096710-08-5P		

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT	1096710-09-6P	1096710-10-9P	1096710-11-0P	1096710-12-1P
	1096710-13-2P	1096710-14-3P	1096710-15-4P	1096710-16-5P
	1096710-17-6P	1096710-18-7P	1096710-19-8P	1096710-20-1P
	1096710-21-2P	1096710-22-3P	1096710-23-4P	1096710-24-5P
	1096710-25-6P	1096710-26-7P	1096710-27-8P	1096710-28-9P
	1096710-29-0P	1096710-30-3P	1096710-31-4P	1096710-32-5P
	1096710-33-6P	1096710-34-7P	1096710-35-8P	1096710-36-9P
	1096710-37-0P	1096710-38-1P	1096710-39-2P	1096710-40-5P
	1096710-41-6P	1096710-42-7P	1096710-43-8P	1096710-44-9P
	1096710-45-0P	1096710-46-1P	1096710-47-2P	1096710-48-3P
	1097249-96-8P	1097249-01-8P	1097249-05-2P	1097249-12-1P
	1097249-13-2P	1097249-15-4P	1097249-17-6P	1097249-21-2P
	1097249-22-3P	1097249-24-5P	1097249-27-8P	1097249-29-0P
	1097249-31-4P	1097249-34-7P	1097249-36-9P	1097249-38-1P
	1097249-40-5P	1097249-43-8P	1097249-45-0P	1097249-47-2P
	1097249-49-4P	1097249-56-3P	1097249-57-4P	1097249-60-9P
	1097249-63-2P	1097249-64-3P	1097249-70-1P	1097249-72-3P
	1097249-73-4P	1097249-76-7P	1097249-78-9P	1097249-80-3P
	1097249-82-5P	1097249-85-8P	1097249-87-0P	1097249-89-2P
	1097249-92-7P	1097249-94-9P	1097249-96-1P	1097249-99-4P
	1097250-01-5P	1097250-03-7P	1097250-09-3P	1097250-10-6P
	1097250-14-0P	1097250-16-2P	1097250-17-3P	1097250-21-9P
	1097250-23-1P	1097250-27-5P	1097250-28-6P	1097250-30-0P
	1097250-34-4P	1097250-35-5P	1097250-37-7P	1097250-41-3P
	1097250-42-4P	1097250-44-6P	1097250-45-7P	1097250-49-1P
	1097250-51-5P	1097250-52-6P		

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT 139691-76-2, Raf kinase
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)

(inhibitors; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT 1095823-56-5P 1095823-69-0P 1095824-42-2P
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)

(intermediate; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT 1095823-62-3P 1095823-63-4P 1095823-71-4P 1095823-73-6P
 1095824-43-3P
 RL: PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT 368-71-8P, 1,2-Diamino-4-trifluoromethylbenzene 459-73-4P, Ethyl glycinate 949-90-6P 5305-40-8P 14160-93-1P 15030-72-5P
 17321-94-7P 18202-78-3P 22808-29-3P 33142-21-1P, 2-Chloro-3-oxopropanoic acid ethyl ester 42351-88-2P 49548-40-5P 58910-26-2P 59950-56-0P 64224-60-8P 70227-49-5P 70227-50-8P 70227-51-9P 71090-35-2P, 1,1-Diamino-2-nitroethene 74667-98-4P 81587-18-0P 82353-56-8P 95080-93-6P 98024-63-6P 102999-49-5P 106615-61-6P, 4,6-Dihydroxy-5-fluoropyrimidine 118080-82-3P 141041-83-0P 213265-83-9P, 4,6-Dichloro-5-fluoropyrimidine 223788-14-5P 451491-51-3P 478259-73-3P 851984-15-1P, 4-Amino-6-chloro-5-fluoropyrimidine 863581-67-3P 872088-03-4P 893444-25-2P 893842-76-7P 914916-98-6P 939986-65-9P 1018304-56-7P 1095823-35-0P 1095823-37-2P 1095823-39-4P 1095823-41-8P 1095823-43-0P 1095823-45-2P 1095823-47-4P 1095823-50-9P 1095823-52-1P 1095823-54-3P 1095823-58-7P 1095823-60-1P 1095823-67-8P 1095823-75-8P 1095823-77-0P 1095823-79-2P 1095823-83-8P 1095823-85-0P 1095823-87-2P 1095823-91-8P 1095823-93-0P 1095823-95-2P 1095823-99-6P 1095824-01-3P 1095824-03-5P 1095824-05-7P 1095824-08-0P 1095824-10-4P 1095824-12-6P 1095824-14-8P 1095824-16-0P 1095824-21-7P 1095824-22-8P 1095824-24-0P 1095824-25-1P 1095824-28-4P 1095824-29-5P 1095824-32-0P 1095824-33-1P 1095824-34-2P 1095824-35-3P 1095824-36-4P 1095824-37-5P 1095824-38-6P 1095824-39-7P 1095824-40-0P 1095824-41-1P 1095824-45-5P 1095824-46-6P 1095824-47-7P 1095824-48-8P 1095824-50-2P 1095824-51-3P 1095824-52-4P 1095824-53-5P 1095824-54-6P 1095824-55-7P 1095824-56-8P 1095824-57-9P 1095824-58-0P 1095824-59-1P 1095824-67-1P 1095824-68-2P 1095825-41-4P 1095825-71-0P 1097250-57-1P 1097250-58-2P 1097250-61-7P 1097250-62-8P 1097250-65-1P 1097250-66-2P 1097250-69-5P 1097250-71-9P 1097250-73-1P 1097250-75-3P 1097250-77-5P 1097250-79-7P 1097250-82-2P 1097250-84-4P 1097250-86-6P 1097250-90-2P 1097250-92-4P 1097250-94-6P 1097250-95-7P 1097250-98-0P 1097251-04-1P 1097251-06-3P 1097251-07-4P 1097251-09-6P 1097251-12-1P 1097251-14-3P 1097251-16-5P 1097251-17-6P 1097251-21-2P 1097251-23-4P 1097251-26-7P 1097251-28-9P 1097251-29-0P 1097251-31-4P 1097251-33-6P 1097251-36-9P 1097251-38-1P 1097251-43-8P 1097251-45-0P 1097251-48-3P 1097251-50-7P 1097251-52-9P 1097252-41-9P 1097252-46-4P 1097252-49-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT 144697-16-5, B-Raf kinase
 RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)
 (preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors)

useful in treatment of Raf-mediated diseases)

IT 142805-58-1, MEK1 KINASE 146702-84-3 150316-14-6, MEK2 KINASE
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors
 useful in treatment of Raf-mediated diseases)

IT 1095824-44-4P
 RL: PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic
 preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors
 useful in treatment of Raf-mediated diseases)

IT 1097257-17-4P
 RL: BYP (Byproduct); PRPH (Prophetic); PREP (Preparation)
 (prophetic byproduct; preparation of pyrimidinecarboxamide compds. as Raf
 kinase inhibitors useful in treatment of Raf-mediated diseases)

IT 1096359-65-7P 1096359-66-8P 1096359-67-9P 1096359-68-0P
 1096359-69-1P 1096359-70-4P 1096359-71-5P 1096359-72-6P
 1096359-73-7P 1096359-74-8P 1096359-75-9P 1096359-76-0P
 1096359-77-1P 1096359-78-2P 1096359-79-3P 1096359-80-6P
 1096359-81-7P 1096359-82-8P 1096359-83-9P 1096359-84-0P
 1096359-85-1P 1096359-86-2P 1096359-87-3P 1096359-88-4P
 1096359-89-5P 1096359-90-8P 1096359-91-9P 1096359-92-0P
 1096359-93-1P 1096359-94-2P 1096359-95-3P 1096359-96-4P
 1096359-97-5P 1096359-98-6P 1096359-99-7P 1096360-00-7P
 1096360-01-8P 1096360-02-9P 1096360-03-0P 1096360-04-1P
 1096360-05-2P 1096360-06-3P 1096360-07-4P 1096360-08-5P
 1096360-09-6P 1096360-10-9P 1096360-11-0P 1096360-12-1P
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 1096360-18-7P 1096360-19-8P 1096360-20-1P 1096360-21-2P
 1096360-22-3P 1096360-23-4P 1096360-24-5P 1096360-25-6P
 1096360-26-7P 1096360-27-8P 1096360-28-9P 1096360-29-0P
 1096360-30-3P 1096360-31-4P 1096360-32-5P 1096360-33-6P
 1096360-34-7P 1096360-35-8P 1096360-36-9P 1096360-37-0P
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 1096360-42-7P 1096360-43-8P 1096360-44-9P 1096360-45-0P
 1096360-46-1P 1096360-47-2P 1096360-48-3P 1096360-49-4P
 1096360-50-7P 1096360-51-8P 1096360-52-9P 1096360-53-0P
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 1096360-58-5P 1096360-60-9P 1096360-62-1P 1096360-64-3P
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 1096360-85-8P 1096360-86-9P 1096360-87-0P 1096360-88-1P
 1096360-89-2P 1096360-90-5P 1096360-91-6P 1096360-92-7P
 1096360-93-8P 1096360-94-9P 1096360-95-0P 1096360-96-1P
 1096360-97-2P 1096360-98-3P 1096360-99-4P 1096361-00-0P
 1096361-01-1P 1096361-03-3P 1096361-04-4P 1096361-05-5P
 1096361-06-6P 1096361-07-7P 1096361-08-8P 1096361-09-9P
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 1096361-54-4P 1096361-55-5P 1096361-56-6P 1096361-57-7P
 1096361-58-8P 1096361-59-9P 1096361-60-2P 1096361-61-3P

1096361-62-4P	1096361-63-5P	1096361-64-6P	1096361-65-7P
1096361-66-8P	1096361-67-9P	1096361-68-0P	1096361-69-1P
1096361-70-4P	1096361-71-5P	1096361-72-6P	1096361-73-7P
1096361-74-8P	1096361-75-9P	1096361-76-0P	1096361-77-1P
1096361-78-2P	1096361-79-3P	1096361-80-6P	1096361-81-7P
1096361-83-9P	1096361-84-0P	1096361-85-1P	1096361-87-3P
1096361-88-4P	1096361-89-5P	1096361-91-9P	1096361-93-1P
1096361-94-2P	1096361-95-3P	1096361-96-4P	1096361-97-5P
1096361-98-6P	1096361-99-7P	1096362-00-3P	1096362-01-4P
1096362-02-5P	1096362-03-6P	1096362-04-7P	1096362-05-8P
1096362-06-9P			

RL: PAC (Pharmacological activity); PRPH (Prophetic); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prophetic drug candidate; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT	1096362-07-0P	1096362-08-1P	1096362-09-2P	1096362-10-5P
	1096362-11-6P	1096362-12-7P	1096362-13-8P	1096362-14-9P
	1096362-15-0P	1096362-16-1P	1096362-17-2P	1096362-18-3P
	1096362-19-4P	1096362-20-7P	1096362-21-8P	1096362-22-9P
	1096362-23-0P	1096362-24-1P	1096362-25-2P	1096362-26-3P
	1096362-27-4P	1096362-28-5P	1096362-29-6P	1096362-30-9P
	1096362-31-0P	1096362-32-1P	1096362-33-2P	1096362-34-3P
	1096362-35-4P	1096362-36-5P	1096362-37-6P	1096362-38-7P
	1096362-39-8P	1096362-40-1P	1096362-41-2P	1096362-42-3P
	1096362-43-4P	1096362-44-5P	1096362-45-6P	1096362-46-7P
	1096362-47-8P	1096362-48-9P	1096362-49-0P	1096362-50-3P
	1096362-51-4P	1096362-52-5P	1096362-53-6P	1096362-54-7P
	1096362-55-8P	1096362-56-9P	1096362-57-0P	1096362-58-1P
	1096362-59-2P	1096362-60-5P	1096362-61-6P	1096362-62-7P
	1096362-63-8P	1096362-64-9P	1096362-65-0P	1096362-66-1P
	1096362-67-2P	1096362-68-3P	1096362-70-7P	1096362-71-8P
	1096362-72-9P	1096362-73-0P	1096362-74-1P	1096362-75-2P
	1096362-76-3P	1096362-77-4P	1096362-78-5P	1096362-79-6P
	1096362-80-9P	1096362-81-0P	1096362-82-1P	1096362-83-2P
	1096362-84-3P	1096362-85-4P	1096362-86-5P	1096362-87-6P
	1096362-88-7P	1096362-89-8P	1096362-90-1P	1096362-91-2P
	1096362-92-3P	1096362-93-4P	1096362-94-5P	1096362-95-6P
	1096362-96-7P	1096362-97-8P	1096362-98-9P	1096362-99-0P
	1096363-00-6P	1096363-01-7P	1096363-02-8P	1096363-03-9P
	1096363-04-0P	1096363-06-2P	1096363-08-4P	1096363-10-8P
	1096363-12-0P	1096363-13-1P	1096363-15-3P	1096363-17-5P
	1096363-18-6P	1096363-20-0P	1096363-21-1P	1096363-22-2P
	1096363-23-3P	1096363-24-4P	1096363-25-5P	1096363-26-6P
	1096363-27-7P	1096363-28-8P	1096363-29-9P	1096363-30-2P
	1096363-31-3P	1096363-32-4P	1096363-33-5P	1096363-34-6P
	1096363-35-7P	1096363-36-8P	1096363-37-9P	1096363-38-0P
	1096363-39-1P	1096363-40-4P	1096363-41-5P	1096363-42-6P
	1096363-43-7P	1096363-44-8P	1096363-45-9P	1096363-46-0P
	1096363-47-1P	1096363-48-2P	1096363-49-3P	1096363-50-6P
	1096363-51-7P	1096363-52-8P	1096363-53-9P	1096363-54-0P
	1096363-55-1P	1096363-56-2P	1096363-57-3P	1096363-58-4P
	1096363-59-5P	1096363-60-8P	1096363-61-9P	1096363-62-0P
	1096363-63-1P	1096363-64-2P	1096363-65-3P	1096363-66-4P
	1096363-67-5P	1096363-68-6P	1096363-69-7P	1096363-70-0P
	1096363-71-1P	1096363-72-2P	1096363-73-3P	1096363-74-4P
	1096363-75-5P	1096363-76-6P	1096363-77-7P	1096363-78-8P
	1096363-79-9P	1096363-80-2P	1096363-81-3P	1096363-82-4P
	1096363-83-5P	1096363-84-6P	1096363-85-7P	1096363-86-8P
	1096363-87-9P	1096363-88-0P	1096363-89-1P	1096363-90-4P
	1096363-91-5P	1096363-92-6P	1096363-95-9P	1096363-97-1P
	1096363-98-2P	1096363-99-3P	1096364-00-9P	1096364-01-0P

1096364-03-2P	1096364-04-3P	1096364-11-2P	1096364-12-3P
1096364-13-4P	1096364-14-5P	1096364-16-7P	1096364-18-9P
1096364-22-5P	1096364-23-6P	1096364-25-8P	1096364-26-9P
1096364-27-0P	1096364-28-1P	1097257-04-9P	1097257-12-9P
1097257-13-0P	1097257-14-1P		

RL: PAC (Pharmacological activity); PRPH (Prophetic); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prophetic drug candidate; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT 1095825-44-7P

RL: PRPH (Prophetic); PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prophetic drug candidate; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT 6299-87-7P	6-Hydroxypyrimidine-4-carboxylic acid	28668-32-8P
38214-45-8P	38214-46-9P	118080-79-8P
873009-27-9P	893444-15-0P	893444-24-1P
933721-64-3P	933728-94-0P	933731-47-6P
		933753-44-7P
		933759-51-4P

1095823-65-6P	1095824-49-9P	1095825-39-0P	1095825-46-9P
1095825-48-1P	1095825-50-5P	1095825-52-7P	1095825-54-9P
1095825-57-2P	1095825-59-4P	1095825-65-2P	1095825-67-4P
1095825-69-6P	1095825-73-2P	1095825-75-4P	1095825-77-6P
1095825-79-8P	1095825-81-2P	1095825-83-4P	1095825-85-6P
1095825-87-8P	1095825-89-0P	1095825-91-4P	1095825-93-6P
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1095826-03-1P	1095826-05-3P	1095826-07-5P	1095826-09-7P
1095826-11-1P	1095826-13-3P	1095826-15-5P	1095826-17-7P
1095826-19-9P	1095826-21-3P	1095826-23-5P	1095826-25-7P
1095826-27-9P	1097253-60-5P	1097253-61-6P	1097253-64-9P
1097253-66-1P	1097253-68-3P	1097253-70-7P	1097253-72-9P
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1097254-45-9P	1097254-47-1P	1097254-49-3P	1097254-51-7P
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1097255-52-1P	1097255-54-3P	1097255-56-5P	1097255-60-1P
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1097255-80-5P	1097255-83-8P	1097255-84-9P	1097255-85-0P
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1097255-98-5P	1097256-01-3P	1097256-04-6P	1097256-05-7P
1097256-08-0P	1097256-11-5P	1097256-12-6P	1097256-14-8P
1097256-17-1P	1097256-19-3P	1097256-21-7P	1097256-24-0P
1097256-26-2P	1097256-28-4P	1097256-31-9P	1097256-33-1P
1097256-35-3P	1097256-37-5P	1097256-40-0P	1097256-42-2P
1097256-44-4P	1097256-47-7P	1097256-49-9P	1097256-52-4P

1097256-55-7P 1097256-58-0P 1097256-61-5P 1097256-63-7P
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 1097257-15-2P 1097257-16-3P 1097257-18-5P

RL: PRPH (Prophetic); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prophetic intermediate; preparation of pyrimidinecarboxamide compds. as Raf kinase inhibitors useful in treatment of Raf-mediated diseases)

IT 61-82-5, 1H-1,2,4-Triazol-5-amine 62-53-3, Aniline, reactions 62-57-7, 2-Amino-2-methylpropanoic acid 71-36-3, 1-Butanol, reactions 75-31-0, Isopropylamine, reactions 75-97-8, tert-Butyl methyl ketone 75-98-9, Pivalic acid 78-95-5, Chloroacetone 96-50-4, 2-Aminothiazole 96-98-0, 4-Methyl-3-nitrobenzoic acid 98-16-8, 3-Trifluoromethylaniline 100-46-9, Benzylamine, reactions 103-76-4, 1-(2-Hydroxyethyl)piperazine 104-78-9, N,N-Diethylpropane-1,3-diamine 105-36-2, Ethyl 2-bromacetate 105-39-5, Ethyl chloroacetate 106-47-8, 4-Chloroaniline, reactions 107-10-8, n-Propylamine, reactions 107-19-7, Propargyl alcohol 108-00-9, N,N-Dimethylethylenediamine 108-01-0, 2-Dimethylaminoethanol 108-42-9, 3-Chloroaniline 109-00-2, 3-Pyridinol 109-01-3, 1-Methylpiperazine 109-12-6, 2-Pyrimidinamine 109-55-7, N,N-Dimethyl-1,3-propanediamine 109-85-3, 2-Methoxyethylamine 109-94-4, Ethyl formate 109-97-7, Pyrrole 110-89-4, Piperidine, reactions 110-91-8, Morpholine, reactions 119-32-4, 4-Methyl-3-nitroaniline 121-01-7, 4-Nitro-2-trifluoromethylaniline 123-00-2, N-(3-Aminopropyl)morpholine 123-75-1, Pyrrolidine, reactions 141-30-0, 3,6-Dichloropyridazine 141-78-6, Ethyl acetate, reactions 156-87-6, 3-Aminopropanol 288-13-1, Pyrazole 288-32-4, Imidazole, reactions 320-51-4, 4-Chloro-3-trifluoromethylaniline 328-80-3 349-81-5 400-98-6, 2-Nitro-4-trifluoromethylaniline 426-59-5, 3-Trifluoromethylsulfonylaniline 445-13-6, 3-Chloro-4-trifluoromethylaniline 455-14-1, 4-Trifluoromethylaniline 462-08-8, 3-Pyridinamine 488-11-9, Mucobromic acid 504-24-5, 4-Aminopyridine 504-29-0, 2-Aminopyridine 591-54-8, 4-Pyrimidinamine 613-89-8, 2-Amino-1-phenylethanone 616-30-8, 3-Aminopropane-1,2-diol 616-45-5, 2-Pyrrolidinone 623-47-2, Ethyl propynoate 630-18-2, 2,2-Dimethylpropanenitrile 654-70-6, 4-Amino-2-trifluoromethylbenzonitrile 685-88-1, Diethyl fluoromalonate 693-98-1, 2-Methylimidazole 762-21-0, Diethyl acetylenedicarboxylate 769-92-6, 4-tert-Butylaniline 822-36-6, 4-Methylimidazole 927-74-2, 3-Butyn-1-ol 1001-53-2, N-Acetylmethylethylenediamine 1186-70-5, Methoxy-bis(dimethylamino)methane 1193-24-4, 4,6-Dihydroxypyrimidine 1453-58-3, 3-Methylpyrazole 1567-75-5, 1-Acetyl-1-methylcyclopropane 1597-32-6, 2-Amino-6-fluoropyridine 1597-33-7, 2-Fluoropyridin-3-amine 1736-72-7 1737-36-6, 4-Chloro-3-trifluoromethylbenzoic acid 1750-42-1, 3-Aminoisoxazole 1820-80-0, 3-Aminopyrazole 1827-27-6 2038-03-1, N-(2-Aminoethyl)morpholine 2357-47-3, 4-Fluoro-3-trifluoromethylaniline 2434-56-2, 4,6-Diaminopyrimidine 2503-29-9 2799-21-5 3179-63-3, 3-Dimethylaminopropanol 3435-27-6 3731-52-0, 3-Pyridinemethanamine 4005-51-0, 1,3,4-Thiadiazol-2-amine 4078-13-1, N-Acetyl-1,3-propanediamine 4100-41-8, 1,2,3-Thiadiazol-5-amine 4395-98-6, 4-Cyanopiperidine 4418-61-5, 5-Aminotetrazole 4430-75-5 4572-03-6, 1-(3-Aminopropyl)-4-methylpiperazine 4726-85-6, 3-Aminopropanamide 5036-48-6, N-(3-Aminopropyl)imidazole 5049-61-6, 2-Pyrazinamine 5098-11-3 5292-43-3, tert-Butyl bromoacetate 5308-25-8, N-Ethylpiperazine 5369-19-7, 3-tert-Butylaniline 5382-16-1, 4-Piperidinol 5390-04-5, 4-Pentyn-1-ol 5623-95-0, 1-Piperazinecarboxamide 5625-67-2, Piperazinone 5654-83-1 6271-78-9, 6-Chloropyridine-3-carboxamide 6291-85-6, 3-Ethoxypropylamine 6457-49-4, 4-Piperidinemethanol 6627-22-1 6628-77-9, 6-Methoxypyridin-3-amine 7149-42-0, 4-Aminomethyl-1-methylpiperidine 7663-77-6, N-(3-Aminopropyl)pyrrolidin-2-one 7720-39-0,

1H-Imidazol-2-amine 13035-19-3, 4-Piperidinamine 13139-17-8,
 N-Benzylloxycarbonyloxysuccinimide 13258-63-4, 4-(2-Aminoethyl)pyridine
 13484-38-3 13623-94-4, 1,1-Bis(methylthio)-2-nitroethene 16490-02-1,
 4,6-Pyrimidinedicarboxylic acid 20265-38-7, 2-Methoxypyridin-3-amine
 20566-90-9 21717-96-4, 2-Amino-5-fluoropyridine 22059-21-8,
 1-Aminocyclopropanecarboxylic acid 22195-47-7 22356-89-4 22483-09-6,
 Aminoacetaldehyde dimethyl acetal 23159-07-1,
 N-(3-Aminopropyl)pyrrolidine 25057-77-6, 1,2-Dimethylpiperazine
 27578-60-5, 1-Piperidineethanamine 31462-59-6, 4-Pyrimidinecarboxylic
 acid 39093-93-1 39546-32-2, 4-Piperidinecarboxamide 40365-61-5
 40499-83-0, 3-Pyrrolidinol 41661-47-6, 4-Piperidinone 41838-46-4,
 4-Amino-1-methylpiperidine 49750-74-5,
 2-(2-Methoxyethoxy)-5-trifluoromethylaniline 51387-90-7,
 2-(2-Aminoethyl)-1-methylpyrrolidine 51940-63-7 55338-73-3,
 3-Amino-6-cyanopyridine 55676-22-7, 1-(6-Chloropyridin-3-yl)ethanone
 55809-36-4, 3-Amino-5-tert-butylisoxazole 57260-71-6, N-Boc-piperazine
 58757-38-3, 6-Chloropyridine-3-carbonyl chloride 65934-74-9,
 4-Methyl-3-trifluoromethylaniline 70165-31-0,
 6-Cyanopyridine-3-carboxylic acid 73874-95-0,
 4-(tert-Butoxycarbonylamino)piperidine 75178-96-0,
 N-Boc-1,3-propanediamine 79069-50-4 87120-72-7,
 4-Amino-1-(tert-butoxycarbonyl)piperidine 89711-08-0,
 (tert-Butoxycarbonylamino)acetaldehyde 99724-19-3,
 3-(tert-Butoxycarbonylamino)pyrrolidine 100243-39-8, (S)-Pyrrolidin-3-ol
 100859-84-5, 2-Chloroisocotinamide 102065-86-1, 3-Azetidinamine
 106391-86-0 106447-97-6, 2-Amino-4-trifluoromethylpyridine
 106877-33-2, 3-Amino-6-trifluoromethylpyridine 110013-18-8 110013-19-9
 110100-00-0 121307-29-7 122863-12-1 135632-53-0,
 4-((tert-Butoxycarbonylamino)methyl)piperidine 144222-22-0,
 1-(tert-Butoxycarbonyl)piperidin-4-ylmethylamine 146548-59-6,
 2,4,6-Trimethoxybenzylamine hydrochloride 160252-31-3 173340-25-5
 173340-26-6 181219-01-2, 4-(4,4,5,5-Tetramethyl-[1,3,2]dioxaborolan-2-
 yl)pyridine 184637-48-7, tert-Butyl 3-aminopiperidine-1-carboxylate
 186550-13-0, tert-Butyl 3-aminopyrrolidine-1-carboxylate 214701-31-2
 258353-01-4 503160-35-8 537039-44-4 630125-98-3 874830-95-2
 885229-41-4 900254-40-2, 3-(2-Pyrrolidin-1-ylethoxy)-5-
 trifluoromethylaniline 943314-67-8 1023817-05-1 1095824-60-4
 1095824-61-5 1095824-62-6 1095824-63-7 1095824-64-8 1095824-76-2
 1095824-77-3 1097253-02-5 1097253-26-3 1097253-31-0 1097257-19-6
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (starting material; preparation of pyrimidinecarboxamide compds. as Raf
 kinase inhibitors useful in treatment of Raf-mediated diseases)

L9 ANSWER 4 OF 55 CAPLUS COPYRIGHT 2009 ACS ON STN
 AN 2008:1530405 CAPLUS
 DN 150:77500
 ED Entered STN: 24 Dec 2008
 TI 2-Aminothiophene-3-carboxamide derivatives as inhibitors of janus kinases
 and their preparation and use in the treatment of myeloproliferative
 disorders and cancers
 IN Altman, Michael; Christopher, Matthew; Grimm, Jonathan B.; Haidle, Andrew;
 Konrad, Kaleen; Lim, Jongwon; Maccoss, Rachel N.; Machacek, Michelle;
 Osimboni, Ekundayo; Otte, Ryan D.; Siu, Tony; Spencer, Kerrie; Taoka,
 Brandon; Tempest, Paul; Wilson, Kevin; Woo, Hyun Chong; Young, Jonathan;
 Zabierek, Anna
 PA Merck & Co., Inc., USA
 SO PCT Int. Appl., 51pp.
 CODEN: PXXXD2
 DT Patent
 LA English
 CC 27-8 (Heterocyclic Compounds (One Hetero Atom))
 Section cross-reference(s): 1, 63

FAN.CNT 1

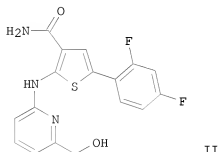
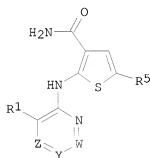
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2008156726	A1	20081224	WO 2008-US7486	20080616
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	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
PRAI	US 2007-936572P	P	20070620		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2008156726	IPCI	A01N0043-06 [I,A]; A01N0043-02 [I,C*]; A61K0031-38 [I,A]; A61K0031-535 [I,A]

OS MARPAT 150:77500

GI



AB The invention provides compds. of formula I that inhibit the four known mammalian JAK kinases (JAK1, JAK2, JAK3 and TYK2) and PDK1. The invention also provides for compns. comprising such inhibitory compds. and methods of inhibiting the activity of JAK1, JAK2, JAK3 TYK2 and PDK1 by administering the compound to a patient in need of treatment for myeloproliferative disorders or cancer. Compds. of formula I wherein W is N and CR4; Y is N and CR3; Z is N and CR2; R1 and R2 are independently H, halo, CN, (un)substituted C1-3 alkyl; R3 is H, halo, CN, Oxo, C1-6 alkyl, C2-6 alkynyl, etc.; R5 is H, halo, CN, oxo, NH2 and derivs., etc.; R5 is (un)substituted (hetero)aryl; and pharmaceutically acceptable salts and stereoisomers thereof, are claimed. Example compound II was prepared by arylation of 2-amino-5-(2,4-difluorophenyl)thiophene-3-carboxamide with (6-bromopyridin-2-yl)methanol. All the invention compds. were evaluated for their janus kinase inhibitory activity (some data given).

ST aminothiophenecarboxamide prepn janus kinase inhibitor treatment myeloproliferative disorder cancer

IT Antitumor agents
Mammalia
Pharmaceutical carriers
(preparation of aminothiophenecarboxamide derivs. as janus kinase inhibitors

useful in the treatment of myeloproliferative disorders and cancer)

IT Myeloproliferative disorders
Neoplasm
(treatment of; preparation of aminothiophenecarboxamide derivs. as janus kinase inhibitors useful in the treatment of myeloproliferative disorders and cancer)

IT 1093872-09-3P 1093872-14-0P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(drug candidate and intermediate; preparation of aminothiophenecarboxamide derivs. as janus kinase inhibitors useful in the treatment of myeloproliferative disorders and cancer)

IT 1093873-15-4P 1093873-18-7P 1093876-04-0P 1093876-18-6P
RL: PAC (Pharmacological activity); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(drug candidate; preparation of aminothiophenecarboxamide derivs. as janus kinase inhibitors useful in the treatment of myeloproliferative disorders and cancer)

IT 1093873-17-6P 1093873-19-8P 1093873-20-1P 1093877-12-3P
1093877-90-7P 1093877-91-8P 1093877-92-9P 1093877-93-0P
1093877-95-2P
RL: PAC (Pharmacological activity); PUR (Purification or recovery); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(drug candidate; preparation of aminothiophenecarboxamide derivs. as janus kinase inhibitors useful in the treatment of myeloproliferative disorders and cancer)

IT 1093871-65-8P 1093871-67-0P 1093871-69-2P 1093871-70-5P
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1093871-79-4P 1093871-80-7P 1093871-81-8P 1093871-82-9P
1093871-83-0P 1093871-84-1P 1093871-85-2P 1093871-86-3P
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1093872-49-1P 1093872-50-4P 1093872-51-5P 1093872-52-6P
1093872-53-7P 1093872-54-8P 1093872-55-9P 1093872-56-0P
1093872-57-1P 1093872-58-2P 1093872-59-3P 1093872-60-6P
1093872-61-7P 1093872-62-8P 1093872-63-9P 1093872-64-0P
1093872-65-1P 1093872-66-2P 1093872-67-3P 1093872-68-4P
1093872-69-5P 1093872-70-8P 1093872-71-9P 1093872-72-0P
1093872-73-1P 1093872-74-2P 1093872-75-3P 1093872-76-4P
1093872-77-5P 1093872-78-6P 1093872-79-7P 1093872-80-0P
1093872-81-1P 1093872-82-2P 1093872-83-3P 1093872-84-4P
1093872-85-5P 1093872-86-6P 1093872-87-7P 1093872-88-8P
1093872-89-9P 1093872-90-2P 1093872-91-3P 1093872-92-4P
1093872-93-5P 1093872-94-6P 1093872-95-7P 1093872-96-8P
1093872-97-9P 1093872-98-0P 1093872-99-1P 1093873-00-7P

1093873-01-8P	1093873-02-9P	1093873-03-0P	1093873-04-1P
1093873-05-2P	1093873-06-3P	1093873-07-4P	1093873-08-5P
1093873-09-6P	1093873-10-9P	1093873-11-0P	1093873-12-1P
1093873-13-2P	1093873-14-3P	1093873-21-2P	1093873-22-3P
1093873-23-4P	1093873-24-5P	1093873-25-6P	1093873-26-7P
1093873-27-8P	1093873-28-9P	1093873-29-0P	1093873-30-3P
1093873-31-4P	1093873-32-5P	1093873-33-6P	1093873-34-7P
1093873-35-8P	1093873-36-9P	1093873-37-0P	1093873-38-1P
1093873-39-2P	1093873-40-5P	1093873-41-6P	1093873-42-7P
1093873-43-8P	1093873-44-9P	1093873-45-0P	1093873-46-1P
1093873-47-2P	1093873-48-3P	1093873-49-4P	1093873-50-7P
1093873-51-8P	1093873-52-9P	1093873-53-0P	1093873-54-1P
1093873-55-2P	1093873-56-3P	1093873-57-4P	1093873-58-5P
1093873-59-6P	1093873-60-9P	1093873-61-0P	1093873-62-1P
1093873-63-2P	1093873-64-3P	1093873-65-4P	1093873-66-5P
1093873-67-6P	1093873-68-7P	1093873-69-8P	1093873-70-1P
1093873-71-2P	1093873-72-3P	1093873-73-4P	1093873-74-5P
1093873-75-6P	1093873-76-7P	1093873-77-8P	1093873-78-9P
1093873-79-0P	1093873-81-4P	1093873-82-5P	1093873-83-6P
1093873-84-7P	1093873-85-8P	1093873-86-9P	1093873-87-0P
1093873-88-1P	1093873-89-2P	1093873-90-5P	1093873-91-6P
1093873-92-7P	1093873-93-8P	1093873-94-9P	1093873-95-0P
1093873-96-1P	1093873-97-2P	1093873-98-3P	1093873-99-4P
1093874-00-0P	1093874-01-1P	1093874-02-2P	1093874-03-3P
1093874-04-4P	1093874-05-5P	1093874-06-6P	1093874-07-7P
1093874-08-8P	1093874-09-9P		

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)

(drug candidate; preparation of aminothiophenecarboxamide derivs. as janus
kinase inhibitors useful in the treatment of myeloproliferative
disorders and cancer)

IT	1093874-10-2P	1093874-11-3P	1093874-12-4P	1093874-13-5P
	1093874-14-6P	1093874-15-7P	1093874-16-8P	1093874-17-9P
	1093874-18-0P	1093874-19-1P	1093874-20-4P	1093874-21-5P
	1093874-22-6P	1093874-23-7P	1093874-24-8P	1093874-25-9P
	1093874-26-0P	1093874-27-1P	1093874-28-2P	1093874-29-3P
	1093874-30-6P	1093874-31-7P	1093874-32-8P	1093874-33-9P
	1093874-34-0P	1093874-35-1P	1093874-36-2P	1093874-37-3P
	1093874-38-4P	1093874-39-5P	1093874-40-8P	1093874-41-9P
	1093874-42-0P	1093874-43-1P	1093874-44-2P	1093874-45-3P
	1093874-46-4P	1093874-47-5P	1093874-48-6P	1093874-49-7P
	1093874-50-0P	1093874-51-1P	1093874-52-2P	1093874-53-3P
	1093874-54-4P	1093874-55-5P	1093874-56-6P	1093874-57-7P
	1093874-58-8P	1093874-59-9P	1093874-60-2P	1093874-61-3P
	1093874-62-4P	1093874-63-5P	1093874-64-6P	1093874-65-7P
	1093874-66-8P	1093874-67-9P	1093874-68-0P	1093874-69-1P
	1093874-70-4P	1093874-71-5P	1093874-72-6P	1093874-73-7P
	1093874-74-8P	1093874-75-9P	1093874-76-0P	1093874-77-1P
	1093874-78-2P	1093874-79-3P	1093874-80-6P	1093874-81-7P
	1093874-82-8P	1093874-83-9P	1093874-84-0P	1093874-85-1P
	1093874-86-2P	1093874-87-3P	1093874-88-4P	1093874-89-5P
	1093874-90-8P	1093874-91-9P	1093874-92-0P	1093874-93-1P
	1093874-94-2P	1093874-95-3P	1093874-96-4P	1093874-97-5P
	1093874-98-6P	1093874-99-7P	1093875-00-3P	1093875-01-4P
	1093875-02-5P	1093875-03-6P	1093875-04-7P	1093875-05-8P
	1093875-06-9P	1093875-07-0P	1093875-08-1P	1093875-09-2P
	1093875-10-5P	1093875-11-6P	1093875-12-7P	1093875-13-8P
	1093875-14-9P	1093875-15-0P	1093875-16-1P	1093875-17-2P
	1093875-18-3P	1093875-19-4P	1093875-20-7P	1093875-21-8P
	1093875-22-9P	1093875-23-0P	1093875-24-1P	1093875-25-2P
	1093875-26-3P	1093875-27-4P	1093875-28-5P	1093875-29-6P

1093875-30-9P	1093875-31-0P	1093875-32-1P	1093875-33-2P
1093875-34-3P	1093875-35-4P	1093875-36-5P	1093875-37-6P
1093875-38-7P	1093875-39-8P	1093875-40-1P	1093875-41-2P
1093875-42-3P	1093875-43-4P	1093875-44-5P	1093875-45-6P
1093875-46-7P	1093875-47-8P	1093875-48-9P	1093875-49-0P
1093875-50-3P	1093875-51-4P	1093875-52-5P	1093875-53-6P
1093875-54-7P	1093875-55-8P	1093875-56-9P	1093875-57-0P
1093875-58-1P	1093875-59-2P	1093875-60-5P	1093875-61-6P
1093875-62-7P	1093875-63-8P	1093875-64-9P	1093875-65-0P
1093875-66-1P	1093875-67-2P	1093875-68-3P	1093875-69-4P
1093875-70-7P	1093875-71-8P	1093875-72-9P	1093875-73-0P
1093875-74-1P	1093875-75-2P	1093875-76-3P	1093875-77-4P
1093875-78-5P	1093875-79-6P	1093875-80-9P	1093875-81-0P
1093875-82-1P	1093875-83-2P	1093875-84-3P	1093875-85-4P
1093875-86-5P	1093875-87-6P	1093875-88-7P	1093875-89-8P
1093875-90-1P	1093875-91-2P	1093875-92-3P	1093875-93-4P
1093875-94-5P	1093875-95-6P	1093875-96-7P	1093875-97-8P
1093875-98-9P	1093875-99-0P	1093876-00-6P	1093876-01-7P
1093876-02-8P	1093876-03-9P	1093876-05-1P	1093876-06-2P
1093876-07-3P	1093876-08-4P	1093876-09-5P	1093876-10-8P
1093876-11-9P	1093876-12-0P	1093876-13-1P	1093876-14-2P
1093876-15-3P	1093876-16-4P	1093876-17-5P	1093876-19-7P
1093876-20-0P	1093876-21-1P	1093876-22-2P	1093876-23-3P
1093876-24-4P	1093876-25-5P	1093876-26-6P	1093876-27-7P
1093876-28-8P	1093876-29-9P	1093876-30-2P	1093876-31-3P
1093876-32-4P	1093876-33-5P	1093876-34-6P	1093876-35-7P
1093876-36-8P	1093876-37-9P	1093876-38-0P	1093876-39-1P
1093876-40-4P	1093876-41-5P	1093876-42-6P	1093876-43-7P
1093876-44-8P	1093876-45-9P		

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of aminothiophenecarboxamide derivs. as janus kinase inhibitors useful in the treatment of myeloproliferative disorders and cancer)

IT	1093876-46-0P	1093876-47-1P	1093876-48-2P	1093876-49-3P
	1093876-50-6P	1093876-51-7P	1093876-52-8P	1093876-53-9P
	1093876-54-0P	1093876-55-1P	1093876-56-2P	1093876-57-3P
	1093876-58-4P	1093876-59-5P	1093876-60-8P	1093876-61-9P
	1093876-62-0P	1093876-63-1P	1093876-64-2P	1093876-65-3P
	1093876-66-4P	1093876-67-5P	1093876-68-6P	1093876-69-7P
	1093876-70-0P	1093876-71-1P	1093876-72-2P	1093876-73-3P
	1093876-74-4P	1093876-75-5P	1093876-76-6P	1093876-77-7P
	1093876-78-8P	1093876-79-9P	1093876-80-2P	1093876-81-3P
	1093876-82-4P	1093876-83-5P	1093876-84-6P	1093876-85-7P
	1093876-86-8P	1093876-87-9P	1093876-88-0P	1093876-89-1P
	1093876-90-4P	1093876-91-5P	1093876-92-6P	1093876-93-7P
	1093876-94-8P	1093876-95-9P	1093876-96-0P	1093876-97-1P
	1093876-98-2P	1093877-00-9P	1093877-01-0P	1093877-02-1P
	1093877-03-2P	1093877-04-3P	1093877-05-4P	1093877-06-5P
	1093877-07-6P	1093877-08-7P	1093877-09-8P	1093877-10-1P
	1093877-11-2P	1093877-13-4P	1093877-14-5P	1093877-15-6P
	1093877-16-7P	1093877-17-8P	1093877-18-9P	1093877-19-0P
	1093877-20-3P	1093877-21-4P	1093877-22-5P	1093877-23-6P
	1093877-24-7P	1093877-25-8P	1093877-26-9P	1093877-27-0P
	1093877-28-1P	1093877-29-2P	1093877-30-5P	1093877-31-6P
	1093877-32-7P	1093877-33-8P	1093877-34-9P	1093877-35-0P
	1093877-36-1P	1093877-37-2P	1093877-38-3P	1093877-39-4P
	1093877-40-7P	1093877-41-8P	1093877-42-9P	1093877-43-0P
	1093877-44-1P	1093877-45-2P	1093877-46-3P	1093877-47-4P
	1093877-48-5P	1093877-49-6P	1093877-50-9P	1093877-51-0P
	1093877-52-1P	1093877-53-2P	1093877-54-3P	1093877-55-4P

1093877-56-5P	1093877-57-6P	1093877-58-7P	1093877-59-8P
1093877-60-1P	1093877-61-2P	1093877-62-3P	1093877-63-4P
1093877-64-5P	1093877-65-6P	1093877-66-7P	1093877-67-8P
1093877-68-9P	1093877-69-0P	1093877-70-3P	1093877-71-4P
1093877-72-5P	1093877-73-6P	1093877-74-7P	1093877-75-8P
1093877-76-9P	1093877-77-0P	1093877-78-1P	1093877-79-2P
1093877-80-5P	1093877-81-6P	1093877-82-7P	1093877-83-8P
1093877-84-9P	1093877-85-0P	1093877-86-1P	1093877-87-2P
1093877-88-3P	1093877-89-4P	1093877-94-1P	

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of aminothiophenecarboxamide derivs. as janus kinase inhibitors useful in the treatment of myeloproliferative disorders and cancer)

IT	1736-67-0P	1737-16-2P	4251-65-4P	4415-73-0P,	
	1,1-Cyclobutanedimethanol	5052-95-9P,			
	1-Oxa-3,8-diazaspiro[4.5]decan-2-one	5053-14-5P	5301-98-4P		
	5832-00-8P	6291-17-4P	20371-79-3P	20849-84-7P	22975-61-7P
	27217-81-8P	33674-94-1P	33852-01-6P	41036-01-5P	54864-83-4P
	61019-14-5P	61019-15-6P	61019-17-8P	61396-73-4P	64128-11-6P
	65515-32-4P	66909-36-2P,	6-Chloro-2-methylnicotinonitrile	70291-28-0P	
	74134-42-2P	74649-06-2P	76013-48-4P	79039-86-4P	83004-10-8P
	83774-09-8P	98626-92-7P	102877-36-1P	111991-19-6P	112575-11-8P
	118078-88-9P	118775-68-1P	118863-62-0P	129601-00-9P	131653-51-5P
	137129-98-7P	139163-56-7P	142978-11-8P	150698-77-4P	153976-27-3P
	168038-14-0P	176249-43-7P	176661-75-9P	177785-14-7P	180207-57-2P,
	1H-Pyrazole-4-ethanol	258506-70-6P	263012-63-1P	286961-15-7P	
	286961-24-8P	287390-25-4P	287944-16-5P	312928-52-2P	332135-62-3P
	354812-05-8P	364794-59-2P	445468-63-3P	475640-18-7P	537013-51-7P,
	4-Bromo-2,6-difluorobenzaldehyde	570398-18-4P	588689-47-8P		
	638218-78-7P	675109-37-2P	736991-31-4P	743438-38-2P,	
	2-Azaspiro[3.3]heptane-2-ethanol	848953-11-7P	851759-19-8P		
	859849-55-1P	871239-58-6P	872700-68-0P	898044-48-9P	914360-19-3P
	936940-67-9P	945892-89-7P	945947-99-9P,		
	3-Oxa-1,8-diazaspiro[4.5]decan-2-one	955370-07-7P	959237-45-7P		
	1017792-22-1P	1022094-03-6P	1033809-42-5P	1044771-74-5P	
	1093877-96-3P	1093877-97-4P	1093877-98-5P	1093877-99-6P	
	1093878-00-2P	1093878-01-3P	1093878-02-4P	1093878-03-5P	
	1093878-04-6P	1093878-05-7P	1093878-06-8P	1093878-07-9P	
	1093878-08-0P	1093878-09-1P	1093878-10-4P	1093878-11-5P	
	1093878-12-6P	1093878-13-7P	1093878-14-8P	1093878-15-9P	
	1093878-16-0P	1093878-17-1P	1093878-18-2P	1093878-19-3P	
	1093878-20-6P	1093878-21-7P	1093878-22-8P	1093878-24-0P	
	1093878-26-2P	1093878-27-3P	1093878-28-4P	1093878-29-5P	
	1093878-30-8P	1093878-31-9P	1093878-32-0P	1093878-33-1P	
	1093878-34-2P	1093878-35-3P	1093878-36-4P	1093878-37-5P	
	1093878-38-6P	1093878-39-7P	1093878-40-0P	1093878-41-1P	
	1093878-42-2P	1093878-43-3P	1093878-44-4P	1093878-45-5P	
	1093878-47-7P	1093878-49-9P	1093878-50-2P	1093878-51-3P	
	1093878-52-4P	1093878-53-5P	1093878-54-6P	1093878-55-7P	
	1093878-56-8P	1093878-57-9P	1093878-58-0P	1093878-59-1P	
	1093878-60-4P	1093878-61-5P	1093878-62-6P	1093878-63-7P	
	1093878-64-8P	1093878-65-9P	1093878-66-0P	1093878-67-1P	
	1093878-68-2P	1093878-69-3P	1093878-70-6P	1093878-71-7P	
	1093878-72-8P	1093878-73-9P	1093878-74-0P	1093878-75-1P	
	1093878-76-2P	1093878-77-3P	1093878-78-4P	1093878-79-5P	
	1093878-80-8P	1093878-81-9P	1093878-82-0P	1093878-83-1P	
	1093878-84-2P	1093878-85-3P	1093878-86-4P	1093878-87-5P	
	1093878-88-6P	1093878-89-7P	1093878-90-0P	1093878-91-1P	
	1093878-92-2P	1093878-93-3P	1093878-94-4P	1093878-95-5P	
	1093878-96-6P	1093878-97-7P	1093878-98-8P	1093878-99-9P	

1093879-00-5P	1093879-01-6P	1093879-02-7P	1093879-03-8P
1093879-04-9P	1093879-05-0P	1093879-06-1P	1093879-07-2P
1093879-08-3P	1093879-09-4P	1093879-10-7P	1093879-11-8P
1093879-12-9P	1093879-13-0P	1093879-14-1P	1093879-15-2P
1093879-16-3P	1093879-17-4P	1093879-18-5P	1093879-19-6P
1093879-20-9P	1093879-21-0P	1093879-22-1P	1093879-23-2P
1093879-24-3P	1093879-25-4P	1093879-26-5P	1093879-27-6P
1093879-28-7P	1093879-29-8P	1093879-30-1P	1093879-31-2P
1093879-32-3P	1093879-33-4P	1093879-34-5P	1093879-35-6P
1093879-36-7P	1093879-37-8P	1093879-38-9P	1093879-39-0P
1093879-40-3P	1093879-41-4P	1093879-42-5P	1093879-43-6P
1093879-44-7P	1093879-45-8P	1093879-46-9P	1093879-47-0P
1093879-48-1P	1093879-49-2P	1093879-50-5P	

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; preparation of aminothiophenecarboxamide derivs. as janus kinase inhibitors useful in the treatment of myeloproliferative disorders and cancer)

IT	1093879-51-6P	1093879-52-7P	1093879-53-8P	1093879-54-9P
	1093879-55-0P	1093879-56-1P	1093879-57-2P	1093879-58-3P
	1093879-59-4P	1093879-60-7P	1093879-61-8P	1093879-62-9P
	1093879-63-0P	1093879-64-1P	1093879-65-2P	1093879-66-3P
	1093879-67-4P	1093879-68-5P	1093879-69-6P	1093879-70-9P
	1093879-71-0P	1093879-72-1P	1093879-73-2P	1093879-74-3P
	1093879-75-4P	1093879-76-5P	1093879-77-6P	1093879-78-7P
	1093879-79-8P	1093879-80-1P	1093879-81-2P	1093879-82-3P
	1093879-83-4P	1093879-84-5P	1093879-85-6P	1093879-86-7P
	1093879-87-8P	1093879-88-9P	1093879-89-0P	1093879-90-3P
	1093879-91-4P	1093879-92-5P	1093879-93-6P	1093879-94-7P
	1093879-95-8P	1093879-96-9P	1093879-97-0P	1093879-98-1P
	1093879-99-2P	1093880-01-3P	1093880-02-4P	1093880-03-5P
	1093880-04-6P	1093880-05-7P	1093880-06-8P	1093880-07-9P
	1093880-08-0P	1093880-09-1P	1093880-10-4P	1093880-11-5P
	1093880-12-6P	1093880-13-7P	1093880-14-8P	1093880-15-9P
	1093880-16-0P	1093880-17-1P	1093880-18-2P	1093880-19-3P
	1093880-20-6P	1093880-21-7P	1093880-22-8P	1093880-23-9P
	1093880-24-0P	1093880-25-1P	1093880-26-2P	1093880-27-3P
	1093880-28-4P	1093880-29-5P	1093880-30-8P	1093880-31-9P
	1093880-32-0P	1093880-33-1P	1093880-34-2P	1093880-35-3P
	1093880-36-4P	1093880-37-5P	1093880-38-6P	1093880-39-7P
	1093880-40-0P	1093880-41-1P	1093880-42-2P	1093880-43-3P
	1093880-44-4P	1093880-45-5P	1093880-46-6P	1093880-47-7P
	1093880-48-8P	1093880-49-9P	1093880-50-2P	1093880-51-3P
	1093880-52-4P	1093880-53-5P	1093880-54-6P	1093880-55-7P
	1093880-56-8P	1093880-57-9P	1093880-58-0P	1093880-59-1P
	1093880-60-4P	1093880-61-5P	1093880-62-6P	1093880-63-7P
	1093880-64-8P	1093880-65-9P	1093880-66-0P	1093880-67-1P
	1093880-68-2P	1093880-70-6P	1093880-71-7P	1093880-72-8P
	1093880-73-9P	1093880-74-0P	1093880-75-1P	1093880-76-2P
	1093880-77-3P	1093880-78-4P	1093880-79-5P	1093880-80-8P
	1093880-81-9P	1093880-82-0P	1093880-83-1P	1093880-84-2P
	1093880-85-3P	1093880-86-4P	1093880-87-5P	1093880-88-6P
	1093880-89-7P	1093880-90-0P	1093880-91-1P	1093880-92-2P
	1093880-93-3P	1093880-94-4P	1093880-95-5P	1093880-96-6P
	1093880-97-7P	1093880-98-8P	1093880-99-9P	1093881-00-5P
	1093881-01-6P	1093881-02-7P	1093881-03-8P	1093881-04-9P
	1093881-05-0P	1093881-06-1P	1093881-07-2P	1093881-08-3P
	1093881-09-4P	1093881-10-7P	1093881-11-8P	1093881-12-9P
	1093881-13-0P	1093881-14-1P	1093881-15-2P	1093881-16-3P
	1093881-17-4P	1093881-18-5P	1093881-19-6P	1093881-20-9P
	1093881-21-0P	1093881-22-1P	1093881-23-2P	1093881-24-3P
	1093881-25-4P	1093881-26-5P	1093881-27-6P	1093881-28-7P

1093881-29-8P 1093881-30-1P 1093881-31-2P 1093881-32-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (intermediate; preparation of aminothiophenecarboxamide derivs. as janus
 kinase inhibitors useful in the treatment of myeloproliferative
 disorders and cancer)

IT 152478-56-3, Janus kinase 1 152478-57-4, Janus kinase 2 153190-61-5,
 TYK2 kinase 157482-36-5, Janus kinase 3 161384-16-3, Janus kinase
 191808-15-8, Phosphoinositide dependent protein kinase 1
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (preparation of aminothiophenecarboxamide derivs. as janus kinase inhibitors
 useful in the treatment of myeloproliferative disorders and cancer)

IT 1093876-99-3P
 RL: PAC (Pharmacological activity); PEP (Physical, engineering or chemical
 process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL
 (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
 (preparation of aminothiophenecarboxamide derivs. as janus kinase inhibitors
 useful in the treatment of myeloproliferative disorders and cancer)

IT 1093873-16-5P
 RL: PAC (Pharmacological activity); PUR (Purification or recovery); SPN
 (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study);
 PREP (Preparation); USES (Uses)
 (preparation of aminothiophenecarboxamide derivs. as janus kinase inhibitors
 useful in the treatment of myeloproliferative disorders and cancer)

IT 1093880-00-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (product; preparation of aminothiophenecarboxamide derivs. as janus kinase
 inhibitors useful in the treatment of myeloproliferative disorders and
 cancer)

IT 75867-44-6P
 RL: BYP (Byproduct); PRPH (Prophetic); PREP (Preparation)
 (prophetic byproduct; preparation of aminothiophenecarboxamide derivs. as
 janus kinase inhibitors useful in the treatment of myeloproliferative
 disorders and cancer)

IT 127-06-0P 5382-89-8P 55368-83-7P 86941-36-8P 89579-92-0P
 89855-31-2P 90792-83-9P 138647-49-1P 168038-13-9P 169297-84-1P
 177940-20-4P 186294-80-4P 186294-83-7P 445468-65-5P 518047-39-7P
 848488-74-4P, 3-Morpholinecarboxamide 1004517-04-7P 1083169-01-0P
 1093881-56-1P 1093881-57-2P 1093881-58-3P 1093881-59-4P
 1093881-60-7P 1093881-61-8P 1093881-62-9P 1093881-63-0P
 1093881-64-1P 1093881-65-2P 1093881-66-3P
 RL: PRPH (Prophetic); RCT (Reactant); SPN (Synthetic preparation); PREP
 (Preparation); RACT (Reactant or reagent)
 (prophetic intermediate; preparation of aminothiophenecarboxamide derivs. as
 janus kinase inhibitors useful in the treatment of myeloproliferative
 disorders and cancer)

IT 67-64-1, Acetone, reactions 75-31-0, Isopropylamine, reactions
 75-33-2, Isopropylthiol 75-65-0, 2-Methylpropan-2-ol, reactions
 75-66-1, tert-Butylthiol 77-77-0, Divinyl sulfone 78-82-0,
 2-Methylpropanenitrile 78-84-2, Isobutyraldehyde 78-96-6,
 2-Hydroxypropylamine 96-32-2, Methyl bromoacetate 96-35-5, Methyl
 hydroxyacetate 96-50-4, 2-Aminothiazole 98-59-9, Tosyl chloride
 100-72-1, 2-Tetrahydropyranmethanol 104-63-2, 2-Benzylaminoethanol
 105-36-2, Ethyl bromoacetate 106-37-6, 1,4-Dibromobenzene 106-40-1,
 4-Bromoaniline 106-95-6, Allyl bromide, reactions 107-03-9,
 1-Propanethiol 107-91-5, Cyanoacetamide 108-00-9,
 N,N-Dimethylethylenediamine 108-01-0, 2-Dimethylaminoethanol
 109-01-3, 1-Methylpiperazine 109-11-5, 3-Morpholinone 109-59-1,
 2-Isopropoxyethanol 109-78-4, 3-Hydroxypropanenitrile 109-83-1,
 N-Methyl-2-hydroxyethylamine 109-85-3, 2-Methoxyethylamine 109-94-4,
 Ethyl formate 110-89-4, Piperidine, reactions 110-91-8,
 Morpholine, reactions 111-42-2, Bis(2-hydroxyethyl)amine, reactions

115-19-5, 2-Methylbut-3-yn-2-ol 120-93-4, 2-Imidazolidinone 122-51-0,
 Ethyl orthoformate 123-11-5, 4-Methoxybenzaldehyde, reactions
 123-75-1, Pyrrolidine, reactions 141-30-0, 3,6-Dichloropyridazine
 141-91-3, 2,6-Dimethylmorpholine 288-13-1, Pyrazole 288-32-4,
 Imidazole, reactions 288-36-8, 1H-1,2,3-Triazole 352-13-6,
 4-Fluorophenylmagnesium bromide 431-38-9 459-56-3, 4-Fluorobenzyl
 alcohol 459-73-4 461-96-1, 1-Bromo-3,5-difluorobenzene 497-25-6,
 2-Oxazolidinone 501-53-1, Benzyloxycarbonyl chloride 503-29-7,
 Azetidine 504-02-9, 1,3-Cyclohexanedione 513-44-0, Isobutylthiol
 558-30-5, 1,2-Epoxy-2-methylpropane 586-95-8, 4-Pyridinemethanol
 609-36-9, Proline 616-45-5, 2-Pyrrolidinone 619-44-3, Methyl
 4-iodobenzoate 623-00-7, 4-Bromobenzonitrile 623-33-6, Glycine ethyl
 ester hydrochloride 623-51-8, Ethyl mercaptoacetate 624-28-2,
 2,5-Dibromopyridine 624-78-2, N-Methylethylamine 626-05-1,
 2,6-Dibromopyridine 637-81-0, Ethyl azidoacetate 922-67-8, Methyl
 propiolate 927-74-2, 3-Butyn-1-ol 930-46-1 1066-54-2,
 Trimethylsilylacetylene 1072-86-2 1074-82-4, Potassium phthalimide
 1192-21-8, 1-Methyl-1H-pyrazol-5-ylamine 1192-81-0,
 5-Chloromethyl-3-methyl-1,2,4-oxadiazole 1489-69-6,
 Cyclopropanecarboxaldehyde 1692-25-7, Pyridin-3-ylboronic acid
 1745-18-2, 1-Allyl-4-chlorobenzene 1792-81-0 1857-19-8 1857-20-1
 1904-31-0, 3-Amino-1-methylpyrazole 1993-03-9, 2-Fluorophenylboronic
 acid 2240-88-2 2483-65-0, 3-Aminopyrrolidin-2-one 2516-33-8,
 Cyclopropylmethanol 2516-47-4, Cyclopropylmethylamine 2749-11-3,
 (S)-2-Aminopropan-1-ol 2799-17-9 2854-16-2 2916-68-9,
 2-Trimethylsilylethanol 3218-02-8, Aminomethylcyclohexane 3433-37-2,
 2-(Hydroxymethyl)piperidine 3699-54-5 3779-29-1, Diethyl
 cyclobutane-1,1-dicarboxylate 3859-41-4, 1,3-Cyclopentanedione
 3914-42-9, 2-Chloromethyl-5-methyl-1,3,4-oxadiazole 3921-01-5,
 2,4-Dibromopyrimidine 3934-20-1, 2,4-Dichloropyrimidine 4254-15-3,
 reactions 4358-64-9 4415-82-1, Cyclobutanemethanol 4637-24-5
 4651-82-5, 2-Amino-3-cyanothiophene 4795-29-3,
 2-Aminomethyltetrahydrofuran 5057-98-7 5076-19-7,
 2,2,3-Trimethylloxirane 5193-03-3, 2-Chloro-6-hydrazinopyridine
 5315-25-3, 2-Bromo-6-methylpyridine 5382-16-1, 4-Piperidinol
 5464-12-0, 1-(2-Hydroxyethyl)-4-methylpiperazine 5675-32-1 6317-37-9,
 5-Nitrothiophene-2-carboxylic acid 6338-70-1,
 3-Aminotetrahydrothiophene-1,1-dioxide 6361-23-5,
 2,5-Dichlorobenzaldehyde 6457-49-4, 4-Piperidinemethanol 6482-24-2,
 1-Bromo-2-methoxyethane 6704-31-0, 3-Oxetanone 6705-33-5,
 Pyrazinemethanol 6952-93-8 13195-50-1, 2-Bromo-5-nitrothiophene
 13889-98-0, N-Acetylpiperazine 14080-51-4,
 2-Aminothiophene-3-carboxamide 14716-89-3,
 5-Hydroxymethyl-3-methylisoxazole 14916-79-1, 3-Heptyn-1-ol
 15205-66-0, 2-Methylsulfonylethanol 15833-61-1,
 3-Tetrahydrofuranmethanol 18997-19-8, Chloromethyl pivalate
 20885-12-5, 2-Chloro-6-fluoropyridine 21190-87-4,
 6-Bromopyridine-2-carboxylic acid 21635-88-1, 3-Aminooxetane
 21987-29-1, 4-Difluoropiperidine 22677-21-0 23100-12-1,
 6-Chloronicotininaldehyde 23804-68-4, 4-Aminomethyl-1-benzylpiperidin-4-ol
 25016-11-9, 1-Methylpyrazole-4-carboxaldehyde 29683-23-6,
 Tetrahydrothiopyran-4-ol 29943-42-8, Tetrahydropyran-4-one 31181-79-0
 31329-64-3, 4-Amino-3,5-dimethylisoxazole 33674-96-3 34160-40-2,
 6-Bromopyridine-2-carboxaldehyde 34368-52-0 35320-23-1 39093-93-1,
 Thiomorpholine dioxide 40499-83-0, 3-Pyrrolidinol 42839-09-8,
 2-Pyrimidinemethanol 45347-82-8, 3-Azetidinol 45513-32-4,
 3-Aminomethyl-3-hydroxymethylloxetane 49669-13-8,
 1-(6-Bromopyridin-2-yl)ethanone 49773-20-8, 2-Methylsulfonylethylamine
 50382-32-6, 2,4-Dimethylthiazole-5-methanol 50534-49-1,
 3-Dimethylaminopyridine 50606-31-0 50675-19-9,
 Tetrahydro-2H-thiopyran-4-carboxaldehyde 50910-54-8,
 trans-4-Aminocyclohexanol hydrochloride 54042-97-6,

5-(Chloromethyl)-3-isopropyl-1,2,4-oxadiazole 55261-00-2 55276-43-2,
 1-Methylsulfonylpiperazine 56414-96-1 56539-66-3,
 3-Methoxy-3-methylbutanol 57012-20-1 57260-73-8, N-Boc-ethylenediamine
 57611-57-1 57848-46-1, 4-Bromo-2-fluorobenzaldehyde 58551-83-0,
 2,4,6-Trifluorobenzaldehyde 58757-38-3, 6-Chloronicotinoyl chloride
 59702-07-7, 1-Methylpiperazin-2-one 61676-62-8,
 2-Isopropoxy-4,4,5,5-tetramethyl-1,3,2-dioxaborolane 65202-50-8, Methyl
 6-chloropyridazine-3-carboxylate 65412-03-5,
 4-(2-Aminoethyl)tetrahydropyran 65515-28-8, Methyl
 2,6-dichloronicotinate 65719-09-7, Methyl 2-methylpyridine-3-carboxylate
 66389-76-2 68108-18-9 69843-13-6 73183-34-3 74572-04-6
 79286-79-6, 3-Aminopyrrolidine 81971-39-3,
 5-Bromo-1-methylpyridin-2(1H)-one 86864-60-0 87576-94-1,
 Trimethylsilylmethyl azide 91476-80-1,
 5,6,7,8-Tetrahydroimidazo[1,2-a]pyrazine 92136-39-5 102065-86-1,
 3-Aminoazetidine 103003-01-6, 2-(Hydroxymethyl)morpholine 103775-61-7
 106910-83-2, 3-(Hydroxymethyl)morpholine 107017-72-1 109074-67-1,
 2-Trifluoromethylpyrrolidine 110925-17-2, 3-Methoxyazetidine
 112575-15-2, 2-Bromo-6-methoxymethylpyridine 112960-56-2 115845-51-7
 119329-48-5 120099-60-7, (R)-3-Methoxypyrrolidine 120099-61-8
 120739-79-9 125295-22-9 130290-79-8, 4-Aminomethyltetrahydropyran
 130551-92-7, 2-Oxazolemethanol 132995-76-7, 2-(2-Hydroxyethyl)morpholine
 136725-54-7, (S)-3-Fluoropyrrolidine 137641-74-8 141567-42-2
 141699-55-0, 1-(tert-Butoxycarbonyl)-azetidin-3-ol 144025-03-6,
 2,4-Difluorophenylboronic acid 149104-90-5, 4-Acetylphenylboronic acid
 153209-97-3, 3-Aminomethyl-3-methyloxetane 155732-68-6 158780-91-7
 164666-68-6, 6-Chloro-2-methylpyridin-3-amine 165253-31-6,
 3-Aminomethyltetrahydrofuran 165736-07-2 212650-43-6 263012-81-3
 288315-03-7, 3,3-Difluoroazetidine hydrochloride 289037-48-5,
 3-Azabicyclo[3.1.0]hexane-6-methanol 290307-40-3,
 2-(5-Bromopyridin-2-yl)propan-2-ol 316131-01-8, 3,3-Difluoropyrrolidine
 332134-60-8 363179-66-2, 3,3-Difluoropiperidine 374776-56-4
 376584-63-3 400877-05-6 433980-62-2, 3-Methylsulfonylpiperidine
 444120-91-6 477904-80-6, Cyclopropanecarboximidamide hydrochloride
 485799-04-0 552846-17-0 603143-27-7 612511-81-6 679431-52-8,
 3,3-Difluoroazetidine 761446-44-0 847818-74-0 852227-86-2
 852228-08-1 863548-52-1 884495-36-7 885273-36-9

RL: RCT (Reactant); RACT (Reactant or reagent)
 (starting material; preparation of aminothiophenecarboxamide derivs. as
 janus kinase inhibitors useful in the treatment of myeloproliferative
 disorders and cancer)

IT 885280-56-8 885331-17-9, 2-Oxazolemethanamine 914947-26-5
 915920-22-8 933745-16-5 936940-63-5 944902-13-0 945459-80-3
 1073355-02-8 1093881-33-4 1093881-34-5 1093881-35-6 1093881-36-7
 1093881-37-8 1093881-38-9 1093881-39-0 1093881-40-3 1093881-41-4
 1093881-42-5 1093881-43-6 1093881-44-7 1093881-45-8 1093881-46-9
 1093881-47-0 1093881-48-1 1093881-49-2 1093881-50-5 1093881-54-9
 1093881-55-0

RL: RCT (Reactant); RACT (Reactant or reagent)
 (starting material; preparation of aminothiophenecarboxamide derivs. as
 janus kinase inhibitors useful in the treatment of myeloproliferative
 disorders and cancer)
 IT 1060642-93-4 1093959-48-8
 RL: PRP (Properties)
 (unclaimed sequence; 2-Aminothiophene-3-carboxamide derivs. as
 inhibitors of janus kinases and their preparation and use in the treatment
 of myeloproliferative disorders and cancers)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

- (1) Adams; US 7179836 B2 2007 CAPLUS
- (2) Bloxham; US 20050154014 A1 2005 CAPLUS
- (3) Ushio; US 7112594 B2 2006 CAPLUS

L9 ANSWER 5 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2008:1402558 CAPLUS
 DN 149:585299
 ED Entered STN: 21 Nov 2008
 TI A gum solution for developing and gumming a photopolymer printing plate.
 IN Gries, Willi-Kurt; Hendrikx, Peter; Van Damme, Marc
 PA Agfa Graphics NV, Belg.
 SO PCT Int. Appl., 61pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2008138942	A1	20081120	WO 2008-EP55872	20080514
	W:	AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
PRAI	EP 2007-108228	A	20070515		
	US 2007-938015P	P	20070515		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO	2008138942	IPC1	G03F0007-32 [I,A]
AB	A gum solution is provided which comprises a film forming hydrophilic polymer or surfactant, and a salt formed by reaction of an acid, selected from phosphoric acid and phosphorous acid, with a di- or tri-alkanolamine. The gum solution is suitable for developing and gumming a lithog. photopolymer printing plate precursor. Also provided is a method for preparing a lithog. printing plate wherein this gum solution is used, and whereby printing plates are obtained which exhibit an improved clean-out performance.		
ST	gum soln development gumming photopolymer lithog printing plate		
IT	Alcohols, uses		
	RL: TEM (Technical or engineered material use); USES (Uses) (amino; gum solution for developing and gumming a photopolymer printing plate.)		
IT	Alcohols, uses		
	RL: TEM (Technical or engineered material use); USES (Uses) (coco, ethoxylated, Lutensol A 8; gum solution for developing and gumming a photopolymer printing plate.)		
IT	Polysiloxanes, uses		
	RL: TEM (Technical or engineered material use); USES (Uses) (glycidyl group-containing, Edaplan LA 411; gum solution for developing and gumming a photopolymer printing plate.)		
IT	Polyvinyl butyrals		
	RL: TEM (Technical or engineered material use); USES (Uses) (gum solution for developing and gumming a photopolymer printing plate.)		
IT	Lithographic plates		
	(precursor; gum solution for developing and gumming a photopolymer printing plate.)		

IT 9004-53-9, Dextrin
 RL: TEM (Technical or engineered material use); USES (Uses)
 (Avedex 37LAC19; gum solution for developing and gumming a photopolymer printing plate.)

IT 691397-13-4, Pluronic PE 9400
 RL: TEM (Technical or engineered material use); USES (Uses)
 (Pluronic PE 10300; gum solution for developing and gumming a photopolymer printing plate.)

IT 64-18-6, Formic acid, uses 64-19-7, Acetic acid, uses
 65-85-0, Benzoic acid, uses 77-92-9, Citric acid, uses 78-96-6,
 1-Amino-2-propanol 87-69-4, Tartaric acid, uses 102-71-6,
 Triethanolamine, uses 104-15-4, p-Toluenesulfonic acid, uses 108-01-0,
 N,N-Dimethylamino-ethanol 124-68-5,
 2-Amino-2-methyl-1-propanol 126-92-1, Texapon 842 141-43-5, uses
 149-30-4, 2-Mercaptobenzothiazole 527-07-1, Sodium gluconate 574-93-6,
 Heliogen Blue D 7490 1320-67-8, Dowanol PM 5205-93-6 7005-47-2,
 2-(N,N-Dimethyl)amino-2-methyl-1-propanol 7189-82-4,
 2,2'-Bis(2-chlorophenyl)-4,4',5,5'-tetraphenyl-1,2'-biimidazole
 7647-01-0, Hydrochloric acid, uses 7664-38-2, Phosphoric acid, uses
 7664-93-9, Sulfuric acid, uses 7697-37-2, Nitric acid, uses 9002-98-6,
 Lupasol P 9003-20-7D, Poly(vinyl acetate), hydrolyzed, cyclic acetal
 with butyraldehyde 26636-37-3, Sapogenat T 130 32509-66-3, Hostanox O
 3 36355-55-2, Mono-Z 1620 41593-38-8, Dowanol PPH 70559-25-0,
 Emulsogen TS 160 73539-65-8, FST 426R 937016-53-0, Acticide LA 1206
 937023-37
 RL: TEM (Technical or engineered material use); USES (Uses)
 (gum solution for developing and gumming a photopolymer printing plate.)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

- RE
 (1) Az Electronic Materials Usa Co; EP 1650605 A 2006 CAPLUS
 (2) Fuji Photo Film Co Ltd; EP 1602982 A 2005 CAPLUS
 (3) Fuji Photo Film Co Ltd; EP 1621339 A 2006 CAPLUS
 (4) Fuji Photo Film Co Ltd; EP 1755002 A 2007 CAPLUS
 (5) Kodak Polychrome Graphics Co; EP 1103859 A 2001 CAPLUS
 (6) Williams; WO 2005111727 A 2005 CAPLUS

L9 ANSWER 6 OF 55 CAPLUS COPYRIGHT 2009 ACS ON STN
 AN 2008:1127254 CAPLUS
 DN 149:381792
 ED Entered STN: 19 Sep 2008
 TI Aqueous-based insulating fluids and related methods
 IN Ezell, Ryan; Miller, Jeff; Perez, Greg
 PA USA
 SO U.S. Pat. Appl. Publ., 9pp.
 CODEN: USXXCO
 DT Patent
 LA English
 INCL 174030000; 252062000
 CC 51-2 (Fossil Fuels, Derivatives, and Related Products)
 Section cross-reference(s): 38
 FAN.CNT 4

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 20080223596	A1	20080918	US 2007-685923	20070314
WO 2008110798	A2	20080918	WO 2008-GB868	20080312
WO 2008110798	A3	20090226		

W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM,

Polyoxyalkylenes, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (aqueous-based insulating fluids and related methods)

IT Amines, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (aralkyl; aqueous-based insulating fluids and related methods)

IT Pipes and Tubes
 (conduits, underground; aqueous-based insulating fluids and related methods)

IT Glycols, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (ethers; aqueous-based insulating fluids and related methods)

IT Ethers, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (glycol; aqueous-based insulating fluids and related methods)

IT Spheres
 (hollow; aqueous-based insulating fluids and related methods)

IT Rheology
 pH
 (modifiers; aqueous-based insulating fluids and related methods)

IT Hydration catalysts
 (neg.; aqueous-based insulating fluids and related methods)

IT Liquids
 (organic; aqueous-based insulating fluids and related methods)

IT Polyamines
 RL: TEM (Technical or engineered material use); USES (Uses)
 (polyalkylene; aqueous-based insulating fluids and related methods)

IT Alcohols, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (polyhydric; aqueous-based insulating fluids and related methods)

IT Alcohols, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (trihydric; aqueous-based insulating fluids and related methods)

IT Weight
 (weighting agents; aqueous-based insulating fluids and related methods)

IT 50-00-0, Formaldehyde, uses 50-78-2, Aspirin 56-81-5, Glycerol, uses 57-55-6, Propylene glycol, uses 65-45-2, Salicylamide 65-85-0, Benzoic acid, uses 69-72-7, Salicylic acid, uses 74-85-1D, Ethylene, reaction products with propylene oxide 75-56-9D, Propylene oxide, reaction products with ethylene 79-06-1D, Acrylamide, polymers 79-10-7D, Acrylic acid, esters, polymers 79-20-9, Methyl acetate 79-41-4D, Methacrylic acid, esters, polymers 88-12-0, uses 98-00-0, Furfuryl alcohol 99-76-3, Methyl p-hydroxybenzoate 100-97-0, Hexamethylenetetramine, uses 107-21-1, Ethylene glycol, uses 107-22-2, Glyoxal 107-31-3, Methyl formate 108-01-0, 2-(Dimethylamino)ethanol 108-95-2, Phenol, uses 109-89-7, Diethylamine, uses 110-65-6, Butyne diol 110-88-3, 1,3,5-Trioxane, uses 111-46-6, Diethylene glycol, uses 112-27-6, Triethylene glycol 115-77-5, Pentaerythritol, uses 118-55-8, Phenyl salicylate 118-92-3, Anthranilic acid 122-79-2, Phenyl acetate 123-31-9, Hydroquinone, uses 126-30-7, Neopentyl glycol 141-43-5, 2-Aminoethanol, uses 141-53-7, Sodium formate 141-78-6, Ethyl acetate, uses 150-13-0, p-Aminobenzoic acid 497-19-8, Sodium carbonate, uses 590-29-4, Potassium formate 591-27-5, m-Aminophenol 1321-11-5, Aminobenzoic acid 3495-36-1, Cesium formate 7447-40-7, Potassium chloride (KCl), uses 7647-14-5, Sodium chloride, uses 7647-15-6, Sodium bromide (NaBr), uses 7732-18-5, Water, uses 7789-41-5, Calcium bromide (CaBr2) 9002-98-6, Polyethylenimine 9003-01-4, Acrylic acid polymers 9003-05-8, Polyacrylamide 9003-21-8, Poly (methyl acrylate) 9003-49-0, Poly (butyl acrylate) 9003-77-4, Poly(2-ethylhexyl acrylate) 9011-14-7, Poly(methylmethacrylate) 10043-52-4, Calcium chloride, uses

11070-67-0, Butynediol 12542-32-4, Butenediol 15214-89-8D, derivs.,
 polymers 24621-17-8, Zirconium bromide (ZrBr₂) 24800-44-0,
 Tripropylene glycol 25087-26-7, Methacrylic acid homopolymer
 25265-71-8, Dipropylene glycol 25265-75-2, Butanediol 25322-68-3,
 Polyethylene glycol 25322-69-4 26124-23-2,
 Acrylamide-n-vinylpyrrolidone copolymer 27119-07-9 29348-79-6,
 Pentanediol 40623-75-4
 RL: TEM (Technical or engineered material use); USES (Uses)
 (aqueous-based insulating fluids and related methods)

L9 ANSWER 7 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2008:644143 CAPLUS
 DN 149:179843
 ED Entered STN: 30 May 2008
 TI Controlled generation of hydrogen from formic acid amine adducts
 at room temperature and application in H₂/O₂ fuel cells
 AU Loges, Bjoern; Boddien, Albert; Junge, Henrik; Beller, Matthias
 CS Leibniz-Institut fuer Katalyse e.V., Universitaet Rostock, Rostock, 18059,
 Germany
 SO Angewandte Chemie, International Edition (2008), 47(21), 3962-3965
 CODEN: ACIEF5; ISSN: 1433-7851
 PB Wiley-VCH Verlag GmbH & Co. KGaA
 DT Journal
 LA English
 CC 52-1 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 67
 AB Hydrogen is generated from formic acid amine adducts at room
 temperature used directly in fuel cells (see picture for apparatus). Ruthenium
 phosphine systems act as catalysts in this transformation.
 ST controlled hydrogen formic acid amine adduct ruthenium catalysis
 IT Controlled atmospheres
 Decomposition
 Decomposition catalysts
 (controlled generation of hydrogen from formic acid amine
 adducts at room temperature and application in H₂/O₂ fuel cells)
 IT Organometallic compounds
 RL: CAT (Catalyst use); USES (Uses)
 (controlled generation of hydrogen from formic acid amine
 adducts at room temperature and application in H₂/O₂ fuel cells)
 IT Amines, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (controlled generation of hydrogen from formic acid amine
 adducts at room temperature and application in H₂/O₂ fuel cells)
 IT Fuel cells
 (fuel for; controlled generation of hydrogen from formic acid
 amine adducts at room temperature and application in H₂/O₂ fuel cells)
 IT Carbon black, uses
 RL: CAT (Catalyst use); USES (Uses)
 (support; controlled generation of hydrogen from formic acid
 amine adducts at room temperature and application in H₂/O₂ fuel cells)
 IT 1333-74-0P, Hydrogen, preparation
 RL: ANT (Analyte); SPN (Synthetic preparation); ANST (Analytical study);
 PREP (Preparation)
 (controlled generation of hydrogen from formic acid amine
 adducts at room temperature and application in H₂/O₂ fuel cells)
 IT 7440-05-3, Palladium, uses 7631-86-9, Silica, uses 10049-07-7, Rhodium
 trichloride 10049-08-8, Ruthenium trichloride 12078-28-3, Dicarboxyl
 cyclopentadienyl-iodoiron 15529-49-4, Dichlorotris(triphenylphosphine)
 ruthenium 52462-29-0, Bis(dichloro(p-cymene)ruthenium)
 RL: CAT (Catalyst use); USES (Uses)
 (controlled generation of hydrogen from formic acid amine
 adducts at room temperature and application in H₂/O₂ fuel cells)

IT 1309-37-1P, Ferric oxide, uses 1040186-00-2P
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);
 USES (Uses)
 (controlled generation of hydrogen from formic acid amine
 adducts at room temperature and application in H2/O2 fuel cells)

IT 630-08-0, Carbon monoxide, formation (nonpreparative)
 RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
 (controlled generation of hydrogen from formic acid amine
 adducts at room temperature and application in H2/O2 fuel cells)

IT 7440-37-1, Argon, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (controlled generation of hydrogen from formic acid amine
 adducts at room temperature and application in H2/O2 fuel cells)

IT 108-01-0, Dimethylaminoethanol 121-69-7, Dimethylphenylamine,
 reactions 598-56-1, Dimethylethylamine 927-62-8 3405-45-6,
 Methyldibutylamine 4385-04-0 7378-99-6, Dimethyloctylamine
 7664-41-7, Ammonia, reactions 15077-13-1, Formic acid, compound
 with triethylamine (5:2)
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (controlled generation of hydrogen from formic acid amine
 adducts at room temperature and application in H2/O2 fuel cells)

IT 68-12-2, Dimethylformamide, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (solvent effects; controlled generation of hydrogen from formic
 acid amine adducts at room temperature and application in H2/O2 fuel cells)

RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L9 ANSWER 8 OF 55 CAPLUS COPYRIGHT 2009 ACS ON STN

AN 2007:825678 CAPLUS

DN 147:228569

ED Entered STN: 30 Jul 2007

TI Identification of the Structural Requirements for Mutagenicity, by
Incorporating Molecular Flexibility and Metabolic Activation of Chemicals.
II. General Ames Mutagenicity Model. [Erratum to document cited in
CA146:516278]

AU Serafimova, R.; Todorov, M.; Pavlov, T.; Kotov, S.; Jacob, E.; Aptula, A.;
Mekenyan, O.

CS Laboratory of Mathematical Chemistry, University Prof. As. Zlatarov,
Bourga, 8000, Bulg.

SO Chemical Research in Toxicology (2007), 20(8), 1225

CODEN: CRTOEC; ISSN: 0893-228X

PB American Chemical Society

DT Journal

LA English

CC 4-6 (Toxicology)

AB On page 673, in the conclusion section, the text, "As a comparative
exercise, the alerts used in the present work were compared with three
alert lists of Ashby, Kazius, and Benigni," should read: "As a comparative
exercise, the alerts used in the present work were compared with alert
lists of Ashby and Kazius, as well as the lists reported by Benigni in his
review."

ST erratum mutagenicity mol flexibility QSAR model mutagen

IT Molecular topology

Mutagenicity

Mutagens

Salmonella typhimurium

Simulation and Modeling

(identification of structural requirements for mutagenicity, by
incorporating mol. flexibility and metabolic activation of chems. in
general Ames mutagenicity model (Erratum))

IT Polyoxoalkylenes, biological studies

RL: ADV (Adverse effect, including toxicity); PRP (Properties); BIOL
(Biological study)

(identification of structural requirements for mutagenicity, by
incorporating mol. flexibility and metabolic activation of chems. in
general Ames mutagenicity model (Erratum))

IT Structure-activity relationship

(mutagenic; identification of structural requirements for mutagenicity,
by incorporating mol. flexibility and metabolic activation of chems. in
general Ames mutagenicity model (Erratum))

IT 50-00-0, Formaldehyde, biological studies 50-18-0, Cyclophosphamide

50-29-3, 4,4'-DDT, biological studies 50-32-8, 3,4-Benzopyrene,

biological studies 50-33-9, Phenylbutazone, biological studies

50-34-0, Propanteline bromide 50-53-3, Chlorpromazine, biological

studies 50-55-5, Reserpine 50-78-2, Acetylsalicylic acid 50-81-7,

Vitamin C, biological studies 51-17-2, Benzimidazole 51-21-8,

Fluorouracil 51-28-5, 2,4-Dinitrophenol, biological studies 51-30-9,

Isoproterenol hydrochloride 51-41-2 51-43-4, Epinephrine 51-65-0,

4-Fluoro-DL-phenylalanine 51-79-6, Urethane 52-24-4 52-28-8, Codeine phosphate 52-68-6, Trichlorfon 53-03-2, Prednisone 53-19-0
 53-70-3, Dibenz[a,h]anthracene 53-86-1, Indomethacin 53-94-1 53-95-2
 53-96-3, 2-Acetylaminofluorene 54-31-9, Furosemide 55-18-5,
 N-Nitrosodiethylamine 55-21-0, Benzamide 55-38-9, Fenthion 55-55-0
 55-86-7, Nitrogen mustard hydrochloride 55-98-1, Myleran 56-04-2,
 6-Methyl-2-thiouracil 56-18-8 56-23-5, Carbon tetrachloride,
 biological studies 56-38-2, Parathion 56-40-6, Glycine, biological studies 56-49-5, 3-Methylcholanthrene 56-53-1 56-54-2, Quinidine 56-57-5, 4-Nitroquinoline-1-oxide 56-72-4, Coumaphos 56-81-5, Glycerol, biological studies 56-93-9 57-13-6, Urea, biological studies 57-14-7, 1,1-Dimethylhydrazine 57-41-0, 5,5-Diphenylhydantoin 57-50-1, Sucrose, biological studies 57-55-6, Propylene glycol, biological studies 57-57-8, β -Propiolactone 57-63-6, Ethynylestradiol 57-66-9, Probenecid 57-68-1, Sulfamethazine 57-71-6 57-74-9 57-83-0, Progesterone, biological studies 57-97-6, 7,12-Dimethylbenz[a]anthracene 58-08-2, Caffeine, biological studies 58-14-0, Pyrimethamine 58-33-3, Promethazine hydrochloride 58-54-8, Ethacrynic acid 58-55-9, Theophylline, biological studies 58-89-9, Lindane 58-90-2, 2,3,4,6-Tetrachlorophenol 58-93-5, Hydrochlorothiazide 58-94-6, Chlorothiazide 59-50-7, p-Chloro-m-cresol 59-87-0, Nitrofurazone 59-89-2, N-Nitrosomorpholine 60-09-3, Solvent yellow 1 60-33-3, Linoleic acid, biological studies 60-34-4, Methylhydrazine 60-35-5, Acetamide, biological studies 60-51-5, Dimethoate 60-57-1, Dieldrin 61-25-6, Papaverine hydrochloride 61-76-7, Phenylephrine hydrochloride 61-82-5, 1H-1,2,4-Triazol-3-amine 62-23-7, p-Nitrobenzoic acid 62-44-2, Phenacetin 62-50-0, Ethyl methanesulfonate 62-53-3, Aniline, biological studies 62-55-5, Thiocetamide 62-56-6, Thiourea, biological studies 62-73-7, Dichlorvos 62-75-9, N-Nitrosodimethylamine 63-56-9, Thonzylamine hydrochloride 63-74-1, Sulfanilamide 63-92-3, Phenoxybenzamine hydrochloride 64-18-6, Formic acid, biological studies 64-19-7, Acetic acid, biological studies 64-67-5, Diethyl sulfate 64-75-5, Tetracycline hydrochloride 64-77-7, Tolbutamide 64-86-8, Colchicine 65-45-2, Salicylamide 65-85-0, Benzoic acid, biological studies 66-27-3, Methyl methanesulfonate 66-71-7, o-Phenanthroline 66-75-1, Uracil mustard 66-81-9, Cycloheximide 67-20-9 67-21-0, DL-Ethionine 67-48-1, Choline chloride 67-63-0, Isopropanol, biological studies 67-64-1, Acetone, biological studies 67-72-1, Hexachloroethane 67-97-0, Vitamin D3 68-12-2, N,N-Dimethylformamide, biological studies 69-05-6, Quinacrine dihydrochloride 69-65-8, D-Mannitol 69-74-9, Cytarabine hydrochloride 70-25-7 70-30-4, Hexachlorophene 70-34-8, 1-Fluoro-2,4-dinitrobenzene 71-58-9, Medroxyprogesterone acetate 72-14-0, Sulfathiazole 72-20-8, Endrin 72-43-5, Methoxychlor 72-54-8, DDD 72-55-9, DDE, biological studies 72-56-0 73-22-3, L-Tryptophan, biological studies 73-49-4, Quinethazone 74-11-3, p-Chlorobenzoic acid 74-31-7, N,N'Diphenyl-p-phenylenediamine 74-85-1, Ethylene, biological studies 74-89-5, Monomethylamine, biological studies 74-96-4, Ethyl bromide 75-00-3, Ethyl chloride 75-04-7, Ethylamine, biological studies 75-05-8, Acetonitrile, biological studies 75-07-0, Acetaldehyde, biological studies 75-12-7, Formamide, biological studies 75-25-2, Tribromomethane 75-26-3, 2-Bromopropane 75-27-4, Dichlorobromomethane 75-31-0, Isopropylamine, biological studies 75-34-3, 1,1-Dichloroethane 75-35-4, Vinylidene chloride, biological studies 75-36-5, Acetyl chloride 75-47-8, Triiodomethane 75-52-5, Nitromethane, biological studies 75-55-8, Propylenimine 75-64-9, tert-Butylamine, biological studies 75-65-0, tert-Butyl alcohol, biological studies 75-69-4, Trichlorofluoromethane 75-83-2, 2,2-Dimethylbutane 75-86-5, 2-Hydroxy-2-methylpropanenitrile 75-87-6, Anhydrous chloral 75-91-2, tert-Butyl hydroperoxide 76-01-7, Pentachloroethane 76-06-2, Chloropicrin 76-38-0, Methoxyflurane 76-44-8, Heptachlor 77-06-5,

Gibberellic acid 77-47-4, Hexachlorocyclopentadiene 77-65-6, Bromodiethylacetylcarbamide 77-73-6, Dicyclopentadiene 77-79-2, 3-Sulfolene 78-11-5 78-34-2, Dioxathion 78-38-6, Diethyl ethylphosphonate 78-40-0, Triethyl phosphate 78-42-2, Tris(2-ethylhexyl) phosphate 78-44-4, Carisoprodol 78-51-3 78-59-1, Isophorone 78-79-5, Isoprene, biological studies 78-81-9, Isobutyl amine 78-83-1, Isobutyl alcohol, biological studies 78-84-2, Isobutyraldehyde 78-87-5, 1,2-Dichloropropane 78-88-6, 2,3-Dichloro-1-propene 78-90-0, Propylenediamine 78-93-3, Ethyl methyl ketone, biological studies 78-94-4, Methyl vinyl ketone, biological studies 79-00-5, 1,1,2-Trichloroethane 79-01-6, Trichloroethylene, biological studies 79-08-3, Bromoacetic acid 79-09-4, Propionic acid, biological studies 79-10-7, Acrylic acid, biological studies 79-11-8, Chloroacetic acid, biological studies 79-15-2, N-Bromoacetamide 79-20-9, Methyl acetate 79-21-0, Peroxyacetic acid 79-24-3, Nitroethane 79-29-8, 2,3-Dimethylbutane 79-36-7, Dichloroacetyl chloride 79-41-4, Methacrylic acid, biological studies 79-44-7, Dimethylcarbamyl chloride 79-46-9, 2-Nitropropane 79-94-7 80-05-7, biological studies 80-08-0 80-13-7, Halazone 80-15-9, Cumene hydroperoxide 80-30-8 80-39-7 80-43-3, Cumene peroxide 80-46-6, p-tert-Pentylphenol 80-62-6, Methyl methacrylate 81-07-2, Saccharin 81-11-8, 4,4'-Diamino-2,2'-stilbenedisulfonic acid 81-14-1, Musk ketone 81-49-2, 1-Amino-2,4-dibromanthraquinone 81-54-9, 1,2,4-Trihydroxyanthraquinone 81-55-0, 1,8-Dihydroxy-4,5-dinitroanthraquinone 82-33-7, 1,4-Diamino-5-nitroanthraquinone 82-50-8 82-62-2 82-68-8, Pentachloronitrobenzene 82-75-7, Peric acid 83-26-1, 2-Pivalyl-1,3-indandione 83-32-9, Acenaphthene 83-38-5, 2,6-Dichlorobenzaldehyde 83-66-9, Musk ambrette 83-72-7, 2-Hydroxy-4,1-naphthalenedione 83-79-4, Rotenone 84-61-7, Dicyclohexyl phthalate 84-64-0, biological studies 84-65-1, 9,10-Anthraquinone 84-66-2, Diethyl phthalate 84-69-5, Diisobutyl phthalate 84-74-2, Dibutyl phthalate 84-75-3, Di-n-hexyl phthalate 85-01-8, Phenanthrene, biological studies 85-02-9, Benzo[f]quinoline 85-22-3, 2,3,4,5,6-Pentabromoethylbenzene 85-44-9, Phthalic anhydride 85-98-3, N,N'-Diethylcarbanilide 86-00-0, 2-Nitro-biphenyl 86-28-2, 9-Ethylcarbazole 86-30-6, N-Nitrosodiphenylamine
 RL: ADV (Adverse effect, including toxicity); PRP (Properties); BIOL (Biological study)

(identification of structural requirements for mutagenicity, by incorporating mol. flexibility and metabolic activation of chems. in general Ames mutagenicity model (Erratum))

- IT 86-50-0, Gusathion 86-57-7, 1-Nitronaphthalene 87-25-2, Ethyl anthranilate 87-29-6, Cinnamyl anthranilate 87-59-2, 2,3-Xylidine 87-61-6, 1,2,3-Trichlorobenzene 87-65-0, 2,6-Dichlorophenol 87-68-3, Hexachloro-1,3-butadiene 87-82-1, Hexabromobenzene 87-83-2, Pentabromotoluene 87-86-5, Pentachlorophenol 88-06-2, 2,4,6-Trichlorophenol 88-16-4, o-Chlorobenzotrifluoride 88-21-1, o-Aminobenzenesulfonic acid 88-23-3, 6-Amino-4-chloro-1-phenol-2-sulfonic acid 88-72-2, o-Nitrotoluene 88-73-3, 1-Chloro-2-nitrobenzene 88-75-5, o-Nitrophenol 88-88-0, Picryl chloride 88-89-1, Picric acid 88-96-0, Phthalamide 88-99-3, Phthalic acid, biological studies 89-25-8, 1-Phenyl-3-methyl-5-pyrazolone 89-40-7, 4-Nitrophthalimide 89-61-2, 1,4-Dichloro-2-nitrobenzene 89-63-4, 4-Chloro-2-nitroaniline 89-72-5, O-sec-Butylphenol 89-78-1, Menthol 89-98-5, 2-Chlorobenzaldehyde 90-00-6, O-Ethylphenol 90-04-0, o-Anisidine 90-13-1, 1-Chloronaphthalene 90-33-5, β -Methylumbelliferone 90-41-5, 2-Aminobiphenyl 90-45-9, 9-Aminoacridine 91-08-7, Toluene 2,6-diisocyanate 91-20-3, Naphthalene, biological studies 91-23-6, 2-Nitroanisole 91-44-1 91-58-7, 2-Chloronaphthalene 91-62-3, 6-Methylquinoline 91-66-7, N,N-Diethylaniline 91-68-9,

3-Diethylaminophenol 91-84-9, Pyrilamine 91-93-0 91-97-4 92-52-4,
 Biphenyl, biological studies 92-59-1, N-Ethyl-N-phenylbenzylamine
 92-66-0, 4-Bromobiphenyl 92-67-1, 4-Aminobiphenyl 92-84-2,
 Phenothiazine 92-93-3, 4-Nitrobiphenyl 93-05-0,
 N,N-Diethyl-p-phenylenediamine 93-15-2, Methyl eugenol 93-46-9
 93-58-3, Methyl benzoate 94-20-2, Chlorpropamide 94-25-7, Butyl
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 4-Nitroanthranilic acid 619-23-8, m-Nitrobenzyl chloride 620-22-4,
 m-Tolunitrile 621-31-8, 3-Ethylaminophenol 621-42-1,
 N-Acetyl-m-aminophenol 621-77-2, Tri-N-amylamine 622-51-5, p-Tolylurea
 623-15-4, Furfural acetone 623-17-6, Furfuryl acetate 623-30-3,
 β -2-Furyl acrolein 625-48-9, 2-Nitroethanol 625-86-5,
 2,5-Dimethylfuran 627-05-4, 1-Nitrobutane 627-18-9, 3-Bromo-1-propanol
 627-30-5, 3-Chloro-1-propanol 628-02-4, Hexanamide 628-94-4, Adipamide
 630-20-6, 1,1,1,2-Tetrachloroethane 634-66-2, 1,2,3,4-Tetrachlorobenzene
 634-90-2, 1,2,3,5-Tetrachlorobenzene 634-93-5, 2,4,6-Trichloroaniline
 636-26-0, 5-Methyl-2-thiouracil 638-03-9, m-Toluidine hydrochloride
 643-22-1, Erythromycin stearate 645-05-6, Hexamethylmelamine 645-49-8,
 cis-Stilbene 645-62-5, 2-Ethyl-2-hexenal 646-14-0, 1-Nitrohexane
 673-06-3, D-Phenylalanine 688-74-4, Tributyl borate 723-46-6,
 Surfactothiazole 738-70-5, Trimethoprim 756-79-6, Dimethyl
 methylphosphonate 759-94-4, Eptam 764-42-1, Fumaronitrile 765-34-4,

Glyceraldehyde 768-52-5, N-Isopropylaniline 785-30-8,
 4,4'-Diaminobenzaniline 793-24-8 828-00-2, Dimethoxane 834-28-6,
 Phenformin hydrochloride 839-90-7 842-07-9, Solvent yellow 14
 872-50-4, N-Methyl-2-pyrrolidinone, biological studies 874-42-0,
 2,4-Dichlorobenzaldehyde 879-39-0 881-03-8,
 1-Nitro-2-methylnaphthalene 920-66-1 924-42-5, N-Methylolacrylamide
 RL: ADV (Adverse effect, including toxicity); PRP (Properties); BIOL
 (Biological study)

(identification of structural requirements for mutagenicity, by
 incorporating mol. flexibility and metabolic activation of chems. in
 general Ames mutagenicity model (Erratum))

- IT 931-97-5, Cyclohexanone cyanohydrin 933-75-5, 2,3,6-Trichlorophenol
 933-78-8, 2,3,5-Trichlorophenol 934-32-7, 2-Aminobenzimidazole
 935-95-5, 2,3,5,6-Tetrachlorophenol 952-21-6, 3-Methyl-4'-nitrobiphenyl
 958-93-0, Thenyldiamine hydrochloride 968-81-0, Acetohexamide
 982-57-0, biological studies 989-38-8, Basic red 1 992-59-6, Direct
 red 2 999-55-3, Allyl acrylate 999-81-5 1025-15-6, Triallyl
 isocyanurate 1034-41-9, Chlorodecane alcohol 1071-83-6, Glyphosate
 1072-52-2, 1-Aziridineethanol 1116-40-1, Triisobutylamine 1116-54-7,
 N-Nitrosodiethanolamine 1122-54-9, 4-Acetylpyridine 1126-61-0
 1143-38-0, 1,8-Dihydroxyanthrone 1163-19-5, Decabromodiphenyl ether
 1187-42-4, Diaminomaleonitrile 1212-29-9, N,N'-Dicyclohexylthiourea
 1229-35-2, Methdilazine hydrochloride 1241-94-7, biological studies
 1325-37-7, Direct yellow 11 1326-03-0, Pigment violet 1 1397-89-3,
 Amphoterin B 1421-63-2 1455-77-2, 1H-1,2,4-Triazole-3,5-diamine
 1465-25-4 1467-79-4, Dimethyl cyanamide 1484-12-4, 9-Methylcarbazole
 1504-74-1, o-Methoxycinnamaldehyde 1522-92-5,
 3-Bromo-2,2-bis(bromomethyl)propanol 1562-94-3, p-Azoxyanisole
 1570-64-5, p-Chloro-o-cresol 1571-08-0, Methyl p-formylbenzoate
 1576-35-8, p-Toluenesulfonyl hydrazide 1596-84-5, biological studies
 1606-67-3, 1-Pyrenamine 1634-78-2 1635-61-6, 5-Chloro-2-nitroaniline
 1646-75-9, Aldicarb oxime 1675-54-3 1694-09-3, Acid violet 49
 1694-20-8, (E)-4-Nitrostilbene 1758-68-5, 1,2-Diaminoanthraquinone
 1761-71-3 1777-84-0, 3-Nitro-p-acetophenetide 1806-54-8 1817-73-8,
 2-Bromo-4,6-dinitroaniline 1825-21-4, Pentachloroanisole 1836-75-5,
 Nitrofen 1854-26-8, Dimethyloldihydroxyethyleneurea 1897-45-6
 1912-24-9, Atrazine 1918-02-1, Picloram 1929-82-4 1934-21-0, Acid
 yellow 23 1936-15-8, Acid orange 10 1937-37-7, Direct black 38
 1948-33-0, tert-Butylhydroquinone 1955-45-9, Pivalolactone 1972-08-3,
 trans-A9-Tetrahydrocannabinol 2016-88-8, Amiloride hydrochloride
 2039-87-4, o-Chlorostyrene 2045-52-5, Phenbenzamine hydrochloride
 2050-92-2, Di-N-amylamine 2052-07-5, 2-Bromobiphenyl 2107-76-8
 2113-57-7, 3-Bromobiphenyl 2143-88-6, 4-Methyl-4'-nitrobiphenyl
 2150-54-1, Direct blue 25 2150-60-9 2157-01-9, n-Octyl methacrylate
 2164-17-2, Fluometuron 2179-59-1, Allyl propyl disulfide 2185-92-4,
 2-Biphenylamine hydrochloride 2206-89-5, 2-Chloroethyl acrylate
 2210-28-8, n-Propyl methacrylate 2213-63-0, 2,3-Dichloroquinoxaline
 2243-61-0, 1,4-Naphthalenediamine 2243-62-1, 1,5-Naphthalenediamine
 2244-16-8, D-Carvone 2244-21-5, Potassium dichloroquinurate 2385-85-5,
 Mirex 2425-85-6, C.I. Pigment red 3 2429-71-2, Direct blue 8
 2429-73-4 2429-74-5, Direct blue 15 2429-80-3, C. I. Acid orange 45
 2432-99-7, 11-Aminoundecanoic acid 2438-88-2 2439-35-2, biological
 studies 2461-15-6, 2-Ethylhexyl glycidyl ether 2465-27-2, Basic yellow
 2 2475-45-8, 1,4,5,8-Tetraaminoanthraquinone 2493-84-7,
 p-Octyloxybenzoic acid 2508-20-5, 2-Nitrosofluorene 2528-36-1, Dibutyl
 phenyl phosphate 2602-46-2, Direct blue 6 2645-07-0, 4-Nitrohippuric
 acid 2646-17-5 2675-77-6, Chloroneb 2682-20-4,
 2-Methyl-4-Isothiazolin-3-one 2698-41-1, o-Chlorobenzalmalononitrile
 2735-04-8, 2,4-Dimethoxyaniline 2782-57-2, Dichloroisocyanuric acid
 2782-91-4, Tetramethylthiourea 2783-94-0, FD&C yellow 6 2784-94-3, HC
 blue 1 2810-69-7 2832-40-8, Disperse yellow 3 2835-95-2,
 3-Amino-6-methylphenol 2871-01-4, HC Red 3 2873-97-4, Diacetone

acrylamide 2893-78-9, Sodium dichlorocyanurate 2941-64-2, S-Ethyl chlorothiocarbonate 2945-96-2, C. I. Direct black 17 3018-12-0, Dichloroacetone 3025-77-2 3066-70-4, biological studies 3068-88-0, β -Butyrolactone 3081-14-9 3129-91-7, Dicyclohexylamine nitrite 3160-37-0, Piperonylidene acetone 3165-93-3, 4-Chloro-o-toluidine hydrochloride 3179-47-3, n-Decyl methacrylate 3209-22-1, 2,3-Dichloronitrobenzene 3237-50-1, Alloxan monohydrate 3252-43-5, Dibromoacetone 3266-23-7, 2,3-Epoxybutane 3268-87-9, Octachlorodibenzo-p-dioxin 3319-31-1 3322-93-8 3333-52-6, Tetramethylsuccinonitrile 3468-63-1, Pigment orange 5 3524-68-3, Pentaerythritol triacrylate 3544-23-8 3546-10-9, biological studies 3567-69-9, Acid red 14 3626-28-6, Direct green 1 3648-20-2, Diundecyl phthalate 3658-77-3, 2,5-Dimethyl-4-hydroxy-3(2H)-furanone 3682-19-7 3688-53-7 3689-24-5 3731-39-3 3761-53-3, Acid red 26 4067-16-7, Pentaethylenehexamine 4080-31-3 4098-71-9, Isophorone diisocyanate 4170-30-3, Crotonaldehyde 4196-86-5 4196-87-6 4198-19-0 4309-66-4, trans-4-Aminostilbene 4337-65-9, Mono(2-ethylhexyl) adipate 4342-03-4, Dacarbazine 4345-03-3 4350-09-8, 5-Hydroxyl-tryptophan 4403-61-6, 2-Methyl-2-butenenitrile 4418-26-2, Sodium dehydroacetate 4424-06-0, Pigment orange 43 4444-68-2 4460-86-0, 2,4,5-Trimethoxybenzaldehyde 4465-94-5 4548-53-2, FD&C red 4 4553-62-2, α -Methyl glutaronitrile 4568-28-9, Triethanolamine stearate 4635-87-4, 3-Pentenitrile 4637-56-3 4655-34-9, Isopropyl methacrylate 4719-04-4 4801-39-2, 2-Aminoacetanilide hydrochloride 4802-20-4, Limonene dimercaptan 4823-47-6, 2-Bromoethyl acrylate 4901-51-3, 2,3,4,5-Tetrachlorophenol 5064-31-3, Nitritotriacetic acid trisodium salt 5131-58-8, 4-Nitro-m-phenylenediamine 5131-60-2, 4-Chloro-m-phenylenediamine 5160-02-1, D And C red 9 5216-25-1, 4-Chlorobenzotrichloride 5307-14-2 5323-95-5, Sodium ricinoleate 5397-31-9 5466-77-3 5466-84-2, 4-Nitrophthalic anhydride 5493-45-8 5989-27-5, D-Limonene 6041-94-7, C.I. Pigment red 2 6088-51-3 6109-97-3, 3-Amino-9-ethylcarbazole monohydrochloride 6112-76-1, 6-Mercaptopurine monohydrate 6197-30-4 6201-87-2, 5-Amino-3-sulfosalicylic acid 6219-89-2 6285-57-0, 2-Amino-6-nitrobenzothiazole 6287-38-3, 3,4-Dichlorobenzaldehyde 6317-18-6, biological studies 6358-07-2, 2-Amino-4-chloro-5-nitrophenol 6358-23-2 6358-29-8, Direct red 39 6358-31-2, C.I. Pigment yellow 74 6358-53-8, Solvent red 80 6358-85-6, Pigment yellow 12 6369-59-1 6373-74-6, Acid orange 3 6428-94-0, Direct violet 32 6459-94-5, Acid red 114 6471-49-4, Pigment red 23 6483-86-9 6533-68-2, Scopalamine hydrobromide trihydrate 6610-08-8, 2-Nitrosnaphthalene 6810-26-0 6959-47-3, 2-(Chloromethyl)pyridine hydrochloride 6959-48-4, 3-(Chloromethyl)pyridine hydrochloride 7149-26-0, Linalyl anthranilate 7166-19-0, β -Bromo- β -nitrostyrene 7177-48-2, Ampicillin trihydrate 7195-43-9, Isophthalic acid diglycidyl ester 7206-76-0, 2-Phenyl-2-ethylmalondiamide 7314-08-1 7493-63-2, Allyl anthranilate 7756-96-9, Butyl anthranilate 7779-16-0, Cyclohexyl anthranilate 7779-77-3, Isobutyl anthranilate 8003-22-3, Solvent yellow 33 10043-35-3, Boric acid (H3BO3), biological studies 10125-76-5, 4-Nitrosobiphenyl 10143-23-4, 2,3-Dimethyl-1-pentanol 10213-75-9 10277-43-7, Lanthanum nitrate hexahydrate 10318-26-0, Dibromodulcitol RL: ADV (Adverse effect, including toxicity); PRP (Properties); BIOL (Biological study) (identification of structural requirements for mutagenicity, by incorporating mol. flexibility and metabolic activation of chems. in general Ames mutagenicity model (Erratum))

II 10605-21-7, Carbendazim 11097-69-1, PCB 1254 12224-98-5, Pigment red 81 12225-21-7, Pigment yellow 100 12789-03-6, Chlordane 13014-18-1 13014-24-9 13048-33-4, 1,6-Hexanediol diacrylate 13071-79-9, biological studies 13098-39-0 13114-72-2 13284-42-9, 2-Pentenitrile 13360-63-9, Ethyl N-butylamine 13366-73-9, Photodieldrin 13552-21-1 13552-44-8, 4,4'-Methylenedianiline

dihydrochloride 13674-84-5 13674-87-8 13684-63-4, Phenmedipham
 13889-92-4, Propyl chlorothioformate 13952-84-6, sec-Butylamine
 13961-86-9, biological studies 14371-10-9, trans-Cinnamaldehyde
 14882-18-9, Bismuth subsalicylate 14901-07-6 15110-74-4,
 2,5-Dinitrofluorene 15121-84-3, o-Nitrophenethylalcohol 15481-70-6
 15893-52-4 15950-66-0, 2,3,4-Trichlorophenol 16219-75-3, Ethylidene
 norbornene 16238-56-5 16452-01-0 16529-56-9,
 2-Methyl-3-butenenitrile 17026-81-2, 3-Amino-4-ethoxyacetanilide
 17341-40-1 17359-54-5 17369-59-4, 3-Propylenediphenylthiide 17372-87-1,
 Eosin 17433-31-7 17804-35-2, Benomyl 17831-71-9, Tetraethylene
 glycol diacrylate 17924-92-4, Zearalenone 18024-11-8,
 1,4,9-Trimethylcarbazole 18028-55-2, 1,4-Dimethylcarbazole 18028-56-3,
 1,4,6-Trimethylcarbazole 18662-53-8, Nitrilotriacetic acid trisodium
 salt monohydrate 19315-64-1 19660-16-3, 2,3-Dibromopropyl acrylate
 19686-73-8, 1-Bromo-2-propanol 19780-11-1 20020-02-4,
 1,2,3,4-Tetrachloronaphthalene 20265-97-8, p-Anisidine hydrochloride
 20548-62-3, biological studies 20702-77-6, Neohesperidin dihydrochalcone
 21285-46-1, trans-2,3-Dibromo-2-butene-1,4-diol 21739-91-3, Cytembena
 21829-25-4, Nifedipine 22224-92-6, Phenamiphos 23255-93-8, Hycanthone
 methanesulfonate 23564-05-8, Thiophanate methyl 24140-30-5
 24169-02-6, Econazole nitrate 24325-70-0,
 trans-4-Methyl-4'-nitrostilbene 24370-25-0, 2-Benzimidazolylurea
 24382-04-5, Propanedial sodium 24554-26-5,
 N-[4-(5-Nitro-2-furyl)-2-thiazolyl]formamide 24815-24-5, Rescinnamine
 25322-68-3, Peg 25637-99-4, Hexabromocyclododecane 25843-45-2,
 Azoxymethane 25953-06-4 26446-35-5, Acetin 26471-62-5 26530-20-1,
 Kathon 893 26638-28-8, Methyl pentachlorostearate 26761-40-0,
 Diisodecyl phthalate 28322-02-3, 4-Acetylaminofluorene 29385-43-1,
 Tolyltriazole 29743-15-5, 4-Butyloxybenzal-4'-ethylaniline 29761-21-5,
 Isodecyl diphenyl phosphate 29964-84-9, Isodecyl methacrylate
 31386-38-6 31551-45-8, 2,7-Dinitrofluorene-9-one 32588-76-4
 33229-34-4, HC blue 2 34807-41-5, Mezerein 36355-01-8,
 Hexabromobiphenyl 37853-59-1 38848-76-9 39156-41-7,
 2,4-Diaminobiphenyl sulfate 41122-70-7 42397-64-8, 1,6-Dinitropyrene
 42397-65-9, 1,8-Dinitropyrene 52551-67-4 54810-82-1,
 3,5-Dimethyl-4-aminobiphenyl 54827-17-7, 3,3',5,5'-Tetramethylbenzidine
 56803-37-3, tert-Butylphenyl diphenyl phosphate 62625-14-3,
 2-Amino-6-chloro-4-nitrophenol hydrochloride 64532-97-4, biological
 studies 67219-70-9, 1-Butyl-2-aminonaphthalene 69314-47-2,
 3-Methyl-4-nitrobiphenyl 69884-05-5 70634-28-5 72917-35-2,
 1,4-Dimethyl-6-hydroxy-3-nitrocarbazole 74518-95-9 74518-99-3
 76002-91-0 78491-02-8, Diazolidinylurea 92814-28-3,
 4-Ethyl-3-nitrobiphenyl 108100-28-3, 2-Methyl-7-nitrofluorene
 126335-31-7 126335-36-2 127502-68-5, 2-Isopropyl-4-phenylnitrobenzene
 127502-69-6, 3-Isopropyl-4-aminobiphenyl 127750-13-4 128714-75-0,
 1,6-Dinitrobenzo[al]pyrene 128714-76-1, 3,6-Dinitrobenzo[al]pyrene
 129117-54-0, 1,4-Dimethyl-6-methoxy-3-aminocarbazole 188107-70-2,
 9-Methyl-2-nitro-9H-carbazole 188107-72-4,
 1,4,6-Trimethyl-3-nitro-9H-carbazole 189084-64-8 257595-12-5
 257595-16-9 275795-17-0 279242-09-0 279242-10-3 279242-11-4
 279242-12-5 279242-14-7 279242-16-9 279242-17-0 314084-63-4,
 3,5-Diethyl-4-aminobiphenyl 345667-01-8 345667-02-9 345667-57-4
 345667-58-5 345667-59-6 345667-60-9 345667-61-0 345667-62-1
 389104-53-4, 1-Ethyl-2-aminonaphthalene 389104-54-5 389104-55-6,
 1-tert-Butyl-2-aminonaphthalene 389104-56-7, 1-Ethyl-2-aminofluorene
 389104-57-8, 1-Isopropyl-2-aminofluorene 389104-58-9,
 1-Butyl-2-aminofluorene 389104-59-0, 1-tert-Butyl-2-aminofluorene
 389104-60-3, 3-Ethyl-4-aminobiphenyl 389104-61-4,
 3-Butyl-4-aminobiphenyl 389104-62-5, 3,5-Diisopropyl-4-aminobiphenyl
 RL: ADV (Adverse effect, including toxicity); PRP (Properties); BIOL
 (Biological study)
 (identification of structural requirements for mutagenicity, by

incorporating mol. flexibility and metabolic activation of chems. in
general Ames mutagenicity model (Erratum))

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DN 146:516278
ED Entered STN: 25 Mar 2007
TI Identification of the Structural Requirements for Mutagenicity, by
Incorporating Molecular Flexibility and Metabolic Activation of Chemicals.
II. General Ames Mutagenicity Model
AU Serafimova, R.; Todorov, M.; Pavlov, T.; Kotov, S.; Jacob, E.; Aptula, A.;
Mekenyan, O.
CS Laboratory of Mathematical Chemistry, University Prof. As. Zlatarov,
Bourgas, 8000, Bulg.
SO Chemical Research in Toxicology (2007), 20(4), 662-676
CODEN: CRTOEC; ISSN: 0893-228X
PB American Chemical Society
DT Journal
LA English
CC 4-6 (Toxicology)
AB The tissue metabolic simulator (TIMES) modeling approach is a hybrid
expert system that couples a metabolic simulator together with structure
toxicity rules, underpinned by structural alerts, to predict interaction
of chems. or their metabolites with target macromols. Some of the
structural alerts representing the reactivity pattern-causing effect could
interact directly with the target whereas others necessitated a
combination with two- or three-dimensional quant. structure-activity
relationship models describing the firing of the alerts from the rest of
the mols. Recently, TIMES has been used to model bacterial mutagenicity
(O. Mekenyan, O., et al., 2004). The original model was derived for a
single tester strain, Salmonella typhimurium (TA100), using the Ames test
by the National Toxicol. Program (NTP). The model correctly identified
82% of the primary acting mutagens, 94% of the nonmutagens, and 77% of the
metabolically activated chems. in a training set. The identified high
correlation between activities across different strains changed the
initial strategic direction to look at the other strains in the next
modeling developments. In this respect, the focus of the present work was
to build a general mutagenicity model predicting mutagenicity with respect
to any of the Ames tester strains. The use of all reactivity alerts in
the model was justified by their interaction mechanisms with DNA, found in
the literature. The alerts identified for the current model were analyzed
by comparison with other established alerts derived from human experts.
In the new model, the original NTP training set with 1341 structures was
expanded by 1626 proprietary chems. provided by BASF AG. Eventually, the
training set consisted of 435 chems., which are mutagenic as parents, 397
chems. that are mutagenic after S9 metabolic activation, and 2012
nonmutagenic chems. The general mutagenicity model was found to have 82%
sensitivity, 89% specificity, and 88% concordance for training set chems.
The model applicability domain was introduced accounting for similarity
(structural, mechanistic, etc.) between predicted chems. and training set
chems. for which the model performs correctly.
ST mutagenicity mol flexibility QSAR model mutagen
IT Molecular topology
Mutagenicity
Mutagens
Salmonella typhimurium
Simulation and Modeling
(identification of structural requirements for mutagenicity, by
incorporating mol. flexibility and metabolic activation of chems. in
general Ames mutagenicity model)
IT Polyoxymethylene, biological studies
RL: ADV (Adverse effect, including toxicity); PRP (Properties); BIOL

(Biological study)

(identification of structural requirements for mutagenicity, by incorporating mol. flexibility and metabolic activation of chems. in general Ames mutagenicity model)

IT Structure-activity relationship

(mutagenic; identification of structural requirements for mutagenicity, by incorporating mol. flexibility and metabolic activation of chems. in general Ames mutagenicity model)

- IT 50-00-0, Formaldehyde, biological studies 50-18-0, Cyclophosphamide
50-29-3, 4,4'-DDT, biological studies 50-32-8, 3,4-Benzopyrene,
biological studies 50-33-9, Phenylbutazone, biological studies
50-34-0, Propantheline bromide 50-53-3, Chlorpromazine, biological
studies 50-55-5, Reserpine 50-78-2, Acetylsalicylic acid 50-81-7,
Vitamin C, biological studies 51-17-2, Benzimidazole 51-21-8,
Fluorouracil 51-28-5, 2,4-Dinitrophenol, biological studies 51-30-9,
Isoproterenol hydrochloride 51-41-2 51-43-4, Epinephrine 51-65-0,
4-Fluoro-DL-phenylalanine 51-79-6, Urethane 52-24-4 52-28-8, Codeine
phosphate 52-68-6, Trichlorfon 53-03-2, Prednisone 53-19-0
53-70-3, Dibenz[a,h]anthracene 53-86-1, Indomethacin 53-94-1 53-95-2
53-96-3, 2-Acetylaminofluorene 54-31-9, Furosemide 55-18-5,
N-Nitrosodiethylamine 55-21-0, Benzamide 55-38-9, Fenthion 55-55-0
55-86-7, Nitrogen mustard hydrochloride 55-98-1, Myleran 56-04-2,
6-Methyl-2-thiouracil 56-18-8 56-23-5, Carbon tetrachloride,
biological studies 56-38-2, Parathion 56-40-6, Glycine, biological
studies 56-49-5, 3-Methylcholanthrene 56-53-1 56-54-2, Quinidine
56-57-5, 4-Nitroquinoline-1-oxide 56-72-4, Coumaphos 56-81-5,
Glycerol, biological studies 56-93-9 57-13-6, Urea, biological studies
57-14-7, 1,1-Dimethylhydrazine 57-41-0, 5,5-Diphenylhydantoin 57-50-1,
Sucrose, biological studies 57-55-6, Propylene glycol, biological
studies 57-57-8, β -Propiolactone 57-63-6, Ethynylestradiol
57-66-9, Probenecid 57-68-1, Sulfamethazine 57-71-6 57-74-9
57-83-0, Progesterone, biological studies 57-97-6,
7,12-Dimethylbenz[a]anthracene 58-08-2, Caffeine, biological studies
58-14-0, Pyrimethamine 58-33-3, Promethazine hydrochloride 58-54-8,
Ethacrynic acid 58-55-9, Theophylline, biological studies 58-89-9,
Lindane 58-90-2, 2,3,4,6-Tetrachlorophenol 58-93-5,
Hydrochlorothiazide 58-94-6, Chlorothiazide 59-50-7, p-Chloro-m-cresol
59-87-0, Nitrofurazone 59-89-2, N-Nitrosomorpholine 60-09-3, Solvent
yellow 1 60-33-3, Linoleic acid, biological studies 60-34-4,
Methylhydrazine 60-35-5, Acetamide, biological studies 60-51-5,
Dimethoate 60-57-1, Dieldrin 61-25-6, Papaverine hydrochloride
61-76-7, Phenylephrine hydrochloride 61-82-5, 1H-1,2,4-Triazol-3-amine
62-23-7, p-Nitrobenzoic acid 62-44-2, Phenacetin 62-50-0, Ethyl
methanesulfonate 62-53-3, Aniline, biological studies 62-55-5,
Thioacetamide 62-56-6, Thiourea, biological studies 62-73-7,
Dichlorvos 62-75-9, N-Nitrosodimethylamine 63-56-9, Thonzylamine
hydrochloride 63-74-1, Sulfanilamide 63-92-3, Phenoxybenzamine
hydrochloride 64-18-6, Formic acid, biological studies
64-19-7, Acetic acid, biological studies 64-67-5, Diethyl sulfate
64-75-5, Tetracycline hydrochloride 64-77-7, Tolbutamide 64-86-8,
Colchicine 65-45-2, Salicylamide 65-85-0, Benzoic acid, biological
studies 66-27-3, Methyl methanesulfonate 66-71-7, o-Phenanthroline
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 RL: ADV (Adverse effect, including toxicity); PRP (Properties); BIOL
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RL: ADV (Adverse effect, including toxicity); PRP (Properties); BIOL
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(identification of structural requirements for mutagenicity, by
incorporating mol. flexibility and metabolic activation of chems. in
general Ames mutagenicity model)

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 141-43-5, Monoethanolamine, biological studies
 RL: ADV (Adverse effect, including toxicity); PRP (Properties); BIOL
 (Biological study)

(identification of structural requirements for mutagenicity, by
 incorporating mol. flexibility and metabolic activation of chems. in
 general Ames mutagenicity model)

IT 141-75-3, Butyryl chloride 141-78-6, Ethyl acetate, biological studies
 141-84-4, 2-Thioxo-4-thiazolidinone 141-91-3, 2,6-Dimethylmorpholine
 142-04-1, Aniline hydrochloride 142-09-6, N-Hexyl methacrylate
 142-46-1, 2,5-Dithiobiurea 142-47-2, Monosodium L-glutamate 142-78-9,
 Lauryl ethanolamide 142-84-7, Dipropylamine 142-96-1, Dibutyl ether
 143-07-7, Lauric acid, biological studies 143-16-8, Dihexylamine
 143-27-1, Hexadecylamine 143-50-0, Chlordecone 144-62-7, Oxalic acid,
 biological studies 144-82-1, Sulfamethizole 145-49-3,
 1,5-Dihydroxy-4,8-diaminoanthraquinone 147-24-0, Diphenhydramine
 hydrochloride 147-47-7 148-18-5 148-24-3, 8-Hydroxyquinoline,
 biological studies 148-65-2, Chlorothen 148-79-8,
 2-(4-Thiazolyl)benzimidazole 148-82-3, Melphalan 149-30-4,
 2-Mercaptobenzothiazole 149-57-5, 2-Ethylhexanoic acid 149-91-7,
 Gallic acid, biological studies 150-13-0, p-Aminobenzoic acid
 150-38-9, Trisodium EDTA 150-68-5 150-69-6, Dulcine 150-76-5,
 4-Methoxyphenol 150-78-7 151-41-7 151-67-7, Halothane 153-78-6,
 2-Aminofluorene 154-69-8, Tripelennamine hydrochloride 156-10-5,
 p-Nitrosodiphenylamine 156-43-4, p-Phenetidine 156-59-2,
 cis-1,2-Dichloroethylene 156-62-7, Calcium cyanamide 192-97-2,
 Benzo[e]pyrene 205-99-2, Benzo[e]acephenanthrylene 207-08-9,
 Benzo[k]fluoranthene 262-20-4, Dibenzothioxin 271-89-6, Benzofuran

298-00-0, Methyl parathion 298-59-9, Methylphenidate hydrochloride
 301-04-2, Lead acetate 301-12-2, Metasystox-R 301-13-3 302-01-2,
 Hydrazine, biological studies 302-17-0, Chloral hydrate 303-34-4,
 Lasiocarpine 303-47-9, Ochrotoxin A 305-03-3, Chlorambucil 309-00-2,
 Aldrin 309-36-4, Sodium methohexital 314-13-6, Direct blue 53
 316-42-7, Emetine hydrochloride 320-67-2, 5-Azacytidine 326-61-4,
 Piperonyl acetate 334-48-5, Decanoic acid 346-18-9, Polythiazide
 357-57-3, Brucine 367-25-9, 2,4-Difluoroaniline 367-51-1, Sodium
 Thioglycolate 379-79-3, Ergotamine tartrate 384-22-5 393-52-2,
 2-Fluorobenzoyl chloride 393-75-9 396-01-0, Triamterene 434-13-9,
 Lithocholic acid 439-14-5, Diazepam 443-48-1, Metronidazole
 446-86-6, Azathioprine 458-37-7, Curcumin 463-04-7, N-Amyl nitrite
 464-10-8, Bromopicrin 470-82-6, Cineole 476-66-4, Ellagic acid
 480-19-3 480-81-9, Seneciophylline 481-72-1,
 1,8-Dihydroxy-3-hydroxymethylanthraquinone 485-47-2, Ninhydrin
 488-41-5 493-52-7, Acid red 2 495-18-1, Benzoxyhydroxamic acid
 495-48-7, Azoxybenzene 496-72-0, 3,4-Diaminotoluene 498-21-5,
 Methylsuccinic acid 500-66-3, Olivetol 503-09-3 503-30-0,
 1,3-Propylene oxide 504-29-0, 2-Aminopyridine 504-88-1,
 3-Nitropropionic acid 505-22-6, 1,3-Dioxane 509-14-8,
 Tetranitromethane 510-15-6, Chlorobenzilate 512-56-1,
 Trimethylphosphate 513-37-1, Dimethylvinyl chloride 517-28-2,
 Hematoxylin 518-47-8, Acid yellow 73 521-31-3 523-47-7,
 β -Cadinene 523-87-5, Dimenhydrinate 527-85-5, 2-Methylbenzamide
 528-74-5, Dichloromethotrexate 529-19-1, o-Tolunitrile 529-20-4,
 o-Tolualdehyde 531-85-1, Benzidine dihydrochloride 532-27-4,
 2-Chloroacetophenone 532-28-5, α -Hydroxybenzeneacetoneitrile
 532-82-1, Basic orange 2 534-22-5, 2-Methylfuran 535-80-8,
 m-Chlorobenzoic acid 536-33-4, Ethionamide 536-90-3, m-Anisidine
 537-92-8, N-Acetyl-m-toluidine 538-74-9, Benzyl sulfide 540-23-8,
 p-Toluidine hydrochloride 540-51-2 540-59-0, 1,2-Dichloroethene
 541-73-1, 1,3-Dichlorobenzene 542-56-3, Isobutyl nitrite 542-75-6,
 1,3-Dichloropropene 544-63-8, Tetradecanoic acid, biological studies
 545-06-2, Trichloroacetoneitrile 548-62-9, Basic violet 3 551-06-4,
 α -Naphthyl isothiocyanate 552-16-9, o-Nitrobenzoic acid
 552-30-7, Trimellitic anhydride 553-30-0, Proflavine sulfate 554-00-7,
 2,4-Dichloroaniline 554-10-9, 3-Iodo-1,2-propanediol 554-84-7,
 m-Nitrophenol 555-30-6 557-11-9, Allyl urea 562-10-7 563-04-2,
 Tri-m-cresyl phosphate 563-47-3, 3-Chloro-2-methylpropene 564-00-1,
 meso-1,2:3,4-Diepoxybutane 569-57-3, Chlorotrianisene 569-61-9, Basic
 red 9 576-24-9, 2,3-Dichlorophenol 577-33-3, 1,2,10-Anthracenetriol
 577-59-3, o-Nitroacetophenone 581-64-6, Thionine 583-39-1,
 2-Mercaptobenzimidazole 583-78-8, 2,5-Dichlorophenol 584-84-9,
 2,4-Toluene diisocyanate 590-17-0, Bromoacetoneitrile 591-17-3,
 m-Bromotoluene 593-56-6, O-Methylhydroxylamine hydrochloride 594-71-8,
 2-Chloro-2-nitropropane 594-72-9, 1,1-Dichloro-1-nitroethane 597-25-1,
 Dimethyl morpholinophosphonate 598-55-0, Methyl carbamate 599-79-1,
 Salicylazosulfapyridine 602-38-0, 1,8-Dinitronaphthalene 602-60-8,
 9-Nitroanthracene 602-64-2, 1,2,3-Trihydroxyanthraquinone 602-87-9,
 5-Nitroacenaphthene 603-34-9, Triphenylamine 603-35-0, Triphenyl
 phosphine, biological studies 603-54-3, N,N-Diphenylurea 605-71-0,
 1,5-Dinitronaphthalene 606-37-1, 1,3-Dinitronaphthalene 607-57-8,
 2-Nitro-9H-fluorene 608-71-9, Pentabromophenol 608-93-5,
 Pentachlorobenzene 609-19-8, 3,4,5-Trichlorophenol 609-20-1,
 2,6-Dichloro-p-phenylenediamine 609-31-4, 2-Nitro-1-butanol 610-49-1,
 1-Anthracenamine 611-06-3, 2,4-Dichloronitrobenzene 612-23-7,
 o-Nitrobenzyl chloride 612-82-8, 3,3'-Dimethylbenzidine dihydrochloride
 612-83-9, 3,3'-Dichlorobenzidine dihydrochloride 613-08-1,
 2-Anthracenecarboxylic acid 613-13-8, 2-Aminoanthracene 613-47-8,
 N-2-Naphthylhydroxylamine 613-93-4, N-Methylbenzamide 614-45-9,
 tert-Butyl perbenzoate 615-66-7, 2-Chloro-p-phenylenediamine 616-23-9,
 2,3-Dichloro-1-propanol 618-87-1, 3,5-Dinitroaniline 619-17-0,

4-Nitroanthranilic acid 619-23-8, m-Nitrobenzyl chloride 620-22-4, m-Tolunitrile 621-31-8, 3-Ethylaminophenol 621-42-1, N-Acetyl-m-aminophenol 621-77-2, Tri-N-amyamine 622-51-5, p-Tolylurea 623-15-4, Furfural acetone 623-17-6, Furfuryl acetate 623-30-3, β -2-Furyl acrolein 625-48-9, 2-Nitroethanol 625-86-5, 2,5-Dimethylfuran 627-05-4, 1-Nitrobutane 627-18-9, 3-Bromo-1-propanol 627-30-5, 3-Chloro-1-propanol 628-02-4, Hexanamide 628-94-4, Adipamide 630-20-6, 1,1,1,2-Tetrachloroethane 634-66-2, 1,2,3,4-Tetrachlorobenzene 634-90-2, 1,2,3,5-Tetrachlorobenzene 634-93-5, 2,4,6-Trichloroaniline 636-26-0, 5-Methyl-2-thiouracil 638-03-9, m-Toluidine hydrochloride 643-22-1, Erythromycin stearate 645-05-6, Hexamethylmelamine 645-49-8, cis-Stilbene 645-62-5, 2-Ethyl-2-hexenal 646-14-0, 1-Nitrohexane 673-06-3, D-Phenylalanine 688-74-4, Tributyl borate 723-46-6, Sulfamethoxazole 738-70-5, Trimethoprim 756-79-6, Dimethyl methylphosphonate 759-94-4, Eptam 764-42-1, Fumaronitrile 765-34-4, Glycidaldehyde 768-52-5, N-Isopropylaniline 785-30-8, 4,4'-Diaminobenzanilide 793-24-8 828-00-2, Dimethoxane 834-28-6, Phenformin hydrochloride 839-90-7 842-07-9, Solvent yellow 14 872-50-4, N-Methyl-2-pyrrolidinone, biological studies 874-42-0, 2,4-Dichlorobenzaldehyde 879-39-0 881-03-8, 1-Nitro-2-methylnaphthalene 920-66-1 924-42-5, N-Methylolacrylamide RL: ADV (Adverse effect, including toxicity); PRP (Properties); BIOL (Biological study)

(identification of structural requirements for mutagenicity, by incorporating mol. flexibility and metabolic activation of chems. in general Ames mutagenicity model)

IT 931-97-5, Cyclohexanone cyanohydrin 933-75-5, 2,3,6-Trichlorophenol 933-78-8, 2,3,5-Trichlorophenol 934-32-7, 2-Aminobenzimidazole 935-95-5, 2,3,5,6-Tetrachlorophenol 952-21-6, 3-Methyl-4'-nitrobiphenyl 958-93-0, Thenyldiamine hydrochloride 968-81-0, Acetohexamide 982-57-0 989-38-8, Basic red 1 992-59-6, Direct red 2 999-55-3, Allyl acrylate 999-81-5 1025-15-6, Triallyl isocyanurate 1034-41-9, Chlordecone alcohol 1071-83-6, Glyphosate 1072-52-2, 1-Aziridineethanol 1116-40-1, Triisobutylamine 1116-54-7, N-Nitrosodiethanolamine 1122-54-9, 4-Acetylpyridine 1126-61-0 1143-38-0, 1,8-Dihydroxyanthrone 1163-19-5, Decabromodiphenyl ether 1187-42-4, Diaminomaleonitrile 1212-29-9, N,N'-Dicyclohexylthiourea 1229-35-2, Methdilazine hydrochloride 1241-94-7 1325-37-7, Direct yellow 11 1326-03-0, Pigment violet 1 1397-89-3, Amphoteracin B 1421-63-2 1455-77-2, 1H-1,2,4-Triazole-3,5-diamine 1465-25-4 1467-79-4, Dimethyl cyanamide 1484-12-4, 9-Methylcarbazole 1504-74-1, o-Methoxycinnamaldehyde 1522-92-5, 3-Bromo-2,2-bis(bromomethyl)propanol 1562-94-3, p-Azoxyanisole 1570-64-5, p-Chloro-o-cresol 1571-08-0, Methyl p-formylbenzoate 1576-35-8, p-Toluenesulfonyl hydrazide 1596-84-5 1606-67-3, 1-Pyrenamine 1634-78-2 1635-61-6, 5-Chloro-2-nitroaniline 1646-75-9, Aldicarb oxime 1675-54-3 1694-09-3, Acid violet 49 1694-20-8, (E)-4-Nitrostilbene 1758-68-5, 1,2-Diaminoanthraquinone 1761-71-3 1777-84-0, 3-Nitro-p-acetophenetide 1806-54-8 1817-73-8, 2-Bromo-4,6-dinitroaniline 1825-21-4, Pentachloroanisole 1836-75-5, Nitrofen 1854-26-8, Dimethyloldihydroxyethyleneurea 1897-45-6 1912-24-9, Atrazine 1918-02-1, Picloram 1929-82-4 1934-21-0, Acid yellow 23 1936-15-8, Acid orange 10 1937-37-7, Direct black 38 1948-33-0, tert-Butylhydroquinone 1955-45-9, Pivalolactone 1972-08-3, trans-A9-Tetrahydrocannabinol 2016-88-8, Amiloride hydrochloride 2039-87-4, o-Chlorostyrene 2045-52-5, Phenbenzamine hydrochloride 2050-92-2, Di-N-amyamine 2052-07-5, 2-Bromobiphenyl 2107-76-8 2113-57-7, 3-Bromobiphenyl 2143-88-6, 4-Methyl-4'-nitrobiphenyl 2150-54-1, Direct blue 25 2150-60-9 2157-01-9, n-Octyl methacrylate 2164-17-2, Fluometuron 2179-59-1, Allyl propyl disulfide 2185-92-4, 2-Biphenylamine hydrochloride 2206-89-5, 2-Chloroethyl acrylate 2210-28-8, n-Propyl methacrylate 2213-63-0, 2,3-Dichloroxinaline 2243-61-0, 1,4-Naphthalenediamine 2243-62-1, 1,5-Naphthalenediamine

2244-16-8, D-Carvone 2244-21-5, Potassium dichlorocyanurate 2385-85-5,
 Mirex 2425-85-6, C.I. Pigment red 3 2429-71-2, Direct blue 8
 2429-73-4 2429-74-5, Direct blue 15 2429-80-3, C. I. Acid orange 45
 2432-99-7, 11-Aminoundecanoic acid 2438-88-2 2439-35-2 2461-15-6,
 2-Ethylhexyl glycidyl ether 2465-27-2, Basic yellow 2 2475-45-8,
 1,4,5,8-Tetraaminoanthraquinone 2493-84-7, p-Octyloxybenzoic acid
 2508-20-5, 2-Nitrosofluorene 2528-36-1, Dibutyl phenyl phosphate
 2602-46-2, Direct blue 6 2645-07-0, 4-Nitrohippuric acid 2646-17-5
 2675-77-6, Chloroneb 2682-20-4, 2-Methyl-4-Isothiazolin-3-one
 2698-41-1, o-Chlorobenzalmalononitrile 2735-04-8, 2,4-Dimethoxyaniline
 2782-57-2, Dichloroisocyanuric acid 2782-91-4, Tetramethylthiourea
 2783-94-9, FD&C yellow 6 2784-94-3, HC blue 1 2810-69-7 2832-40-8,
 Disperse yellow 3 2835-95-2, 3-Amino-6-methylphenol 2871-01-4, HC Red
 3 2873-97-4, Diacetone acrylamide 2893-78-9, Sodium dichlorocyanurate
 2941-64-2, S-Ethyl chlorothiocarbonate 2945-96-2, C. I. Direct black 17
 3018-12-0, Dichloroacetonitrile 3025-77-2 3066-70-4 3068-88-0,
 β-Butyrolactone 3081-14-9 3129-91-7, Dicyclohexylamine nitrite
 3160-37-0, Piperonylidene acetone 3165-93-3, 4-Chloro-o-toluidine
 hydrochloride 3179-47-3, n-Decyl methacrylate 3209-22-1,
 2,3-Dichloronitrobenzene 3237-50-1, Alloxan monohydrate 3252-43-5,
 Dibromoacetonitrile 3266-23-7, 2,3-Epoxybutane 3268-87-9,
 Octachlorodibenzo-p-dioxin 3319-31-1 3322-93-8 3333-52-6,
 Tetramethylsuccinonitrile 3468-63-1, Pigment orange 5 3524-68-3,
 Pentaerythritol triacrylate 3544-23-8 3546-10-9 3567-69-9, Acid red
 14 3626-28-6, Direct green 1 3648-20-2, Diundecyl phthalate
 3658-77-3, 2,5-Dimethyl-4-hydroxy-3(2H)-furanone 3682-19-7 3688-53-7
 3689-24-5 3731-39-3 3761-53-3, Acid red 26 4067-16-7,
 Pentaethylenhexamine 4080-31-3 4098-71-9, Isophorone diisocyanate
 4170-30-3, Crotonaldehyde 4196-86-5 4196-87-6 4198-19-0 4309-66-4,
 trans-4-Aminostilbene 4337-65-9, Mono(2-ethylhexyl) adipate 4342-03-4,
 Dacarbazine 4345-03-3 4350-09-8, 5-Hydroxyl-tryptophan 4403-61-6,
 2-Methyl-2-butenenitrile 4418-26-2, Sodium dehydroacetate 4424-06-0,
 Pigment orange 43 4444-68-2 4460-86-0, 2,4,5-Trimethoxybenzaldehyde
 4465-94-5 4548-53-2, FD&C red 4 4553-62-2, α-Methyl
 glutaronitrile 4568-28-9, Triethanolamine stearate 4635-87-4,
 3-Pentenitrile 4637-56-3 4655-34-9, Isopropyl methacrylate
 4719-04-4 4801-39-2, 2-Aminoacetanilide hydrochloride 4802-20-4,
 Limonene dimercaptan 4823-47-6, 2-Bromoethyl acrylate 4901-51-3,
 2,3,4,5-Tetrachlorophenol 5064-31-3, Nitrilotriacetic acid trisodium
 salt 5131-58-8, 4-Nitro-m-phenylenediamine 5131-60-2,
 4-Chloro-m-phenylenediamine 5160-02-1, D And C red 9 5216-25-1,
 4-Chlorobenzotrichloride 5307-14-2 5323-95-5, Sodium ricinoleate
 5397-31-9 5466-77-3 5466-84-2, 4-Nitrophthalic anhydride 5493-45-8
 5989-27-5, D-Limonene 6041-94-7, C.I. Pigment red 2 6088-51-3
 6109-97-3, 3-Amino-9-ethylcarbazole monohydrochloride 6112-76-1,
 6-Mercaptopurine monohydrate 6197-30-4 6201-87-2,
 5-Amino-3-sulfosalicylic acid 6219-89-2 6285-57-0,
 2-Amino-6-nitrobenzothiazole 6287-38-3, 3,4-Dichlorobenzaldehyde
 6317-18-6 6358-07-2, 2-Amino-4-chloro-5-nitrophenol 6358-23-2
 6358-29-8, Direct red 39 6358-31-2, C.I. Pigment yellow 74 6358-53-8,
 Solvent red 80 6358-85-6, Pigment yellow 12 6369-59-1 6373-74-6,
 Acid orange 3 6428-94-0, Direct violet 32 6459-94-5, Acid red 114
 6471-49-4, Pigment red 23 6483-86-9 6533-68-2, Scopolamine
 hydrobromide trihydrate 6610-08-8, 2-Nitrosonaphthalene 6810-26-0
 6959-47-3, 2-(Chloromethyl)pyridine hydrochloride 6959-48-4,
 3-(Chloromethyl)pyridine hydrochloride 7149-26-0, Linalyl anthranilate
 7166-19-0, β-Bromo-β-nitrostyrene 7177-48-2, Ampicillin
 trihydrate 7195-43-9, Isophthalic acid diglycidyl ester 7206-76-0,
 2-Phenyl-2-ethylmalondiamide 7314-08-1 7493-63-2, Allyl anthranilate
 7756-96-9, Butyl anthranilate 7779-16-0, Cyclohexyl anthranilate
 7779-77-3, Isobutyl anthranilate 8003-22-3, Solvent yellow 33
 10043-35-3, Boric acid (H3BO3), biological studies 10125-76-5,

4-Nitrosobiphenyl 10143-23-4, 2,3-Dimethyl-1-pentanol 10213-75-9
 10277-43-7, Lanthanum nitrate hexahydrate 10318-26-0, Dibromodulcitol
 RL: ADV (Adverse effect, including toxicity); PRP (Properties); B10L
 (Biological study)

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 incorporating mol. flexibility and metabolic activation of chems. in
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IT 10605-21-7, Carbendazim 11097-69-1, PCB 1254 12224-98-5, Pigment red
 81 12225-21-7, Pigment yellow 100 12789-03-6, Chlordane 13014-18-1
 13014-24-9 13048-33-4, 1,6-Hexanediol diacrylate 13071-79-9
 13098-39-0 13114-72-2 13284-42-9, 2-Pentenitrile 13360-63-9, Ethyl
 N-butylamine 13366-73-9, Photodieldrin 13552-21-1 13552-44-8,
 4,4'-Methylenedianiline dihydrochloride 13674-84-5 13674-87-8
 13684-63-4, Phenmedipham 13889-92-4, Propyl chlorothioformate
 13952-84-6, sec-Butylamine 13961-86-9 14371-10-9, trans-Cinnamaldehyde
 14882-18-9, Bismuth subsalicylate 14901-07-6 15110-74-4,
 2,5-Dinitrofluorene 15121-84-3, o-Nitrophenethylalcohol 15481-70-6
 15893-52-4 15950-66-0, 2,3,4-Trichlorophenol 16219-75-3, Ethylidene
 norbornene 16238-56-5 16452-01-0 16529-56-9,
 2-Methyl-3-butenitrile 17026-81-2, 3-Amino-4-ethoxyacetanilide
 17341-40-1 17359-54-5 17369-59-4, 3-Propyldienephthalide 17372-87-1,
 Eosin 17433-31-7 17804-35-2, Benomyl 17831-71-9, Tetraethylene
 glycol diacrylate 17924-92-4, Zearalenone 18024-11-8,
 1,4,9-Trimethylcarbazole 18028-55-2, 1,4-Dimethylcarbazole 18028-56-3,
 1,4,6-Trimethylcarbazole 18662-53-8, Nitrilotriacetic acid trisodium
 salt monohydrate 19315-64-1 19660-16-3, 2,3-Dibromopropyl acrylate
 19686-73-8, 1-Bromo-2-propanol 19780-11-1 20020-02-4,
 1,2,3,4-Tetrachloronaphthalene 20265-97-8, p-Anisidine hydrochloride
 20548-62-3 20702-77-6, Neohesperidin dihydrochalcone 21285-46-1,
 trans-2,3-Dibromo-2-butene-1,4-diol 21739-91-3, Cytembena 21829-25-4,
 Nifedipine 22224-92-6, Phenamiphos 23255-93-8, Hycanthone
 methanesulfonate 23564-05-8, Thiophanate methyl 24140-30-5
 24169-02-6, Econazole nitrate 24325-70-0,
 trans-4-Methyl-4'-nitrostilbene 24370-25-0, 2-Benzimidazolylurea
 24382-04-5, Propanedial sodium 24554-26-5,
 N-[4-(5-Nitro-2-furyl)-2-thiazolyl]formamide 24815-24-5, Rescinnamine
 25322-68-3, Peg 25637-99-4, Hexabromocyclododecane 25843-45-2,
 Azoxymethane 25953-06-4 26446-35-5, Acetin 26471-62-5 26530-20-1,
 Kathon 893 26638-28-8, Methyl pentachlorostearate 26761-40-0,
 Diisodecyl phthalate 28322-02-3, 4-Acetylamino fluorene 29385-43-1,
 Tolyltriazole 29743-15-5, 4-Butyloxybenzal-4'-ethylaniline 29761-21-5,
 Isodecyl diphenyl phosphate 29964-84-9, Isodecyl methacrylate
 31386-38-6 31551-45-8, 2,7-Dinitrofluoren-9-one 32588-76-4
 33229-34-4, HC blue 2 34807-41-5, Mezerein 36355-01-8,
 Hexabromobiphenyl 37853-59-1 38848-76-9 39156-41-7,
 2,4-Diaminoanisole sulfate 41122-70-7 42397-64-8, 1,6-Dinitropyrene
 42397-65-9, 1,8-Dinitropyrene 52551-67-4 54810-82-1,
 3,5-Dimethyl-4-aminobiphenyl 54827-17-7, 3,3',5,5'-Tetramethylbenzidine
 56803-37-3, tert-Butylphenyl diphenyl phosphate 62625-14-3,
 2-Amino-6-chloro-4-nitrophenol hydrochloride 64532-97-4 67219-70-9,
 1-Butyl-2-aminonaphthalene 69314-47-2, 3-Methyl-4-nitrobiphenyl
 69884-05-5 70634-28-5 72917-35-2,
 1,4-Dimethyl-6-hydroxy-3-nitrocarbazole 74518-95-9 74518-99-3
 76002-91-0 78491-02-8, Diazolidinylurea 92814-28-3,
 4-Ethyl-3-nitrobiphenyl 108100-28-3, 2-Methyl-7-nitrofluorene
 126335-31-7 126335-36-2 127502-68-5, 2-Isopropyl-4-phenylnitrobenzene
 127502-69-6, 3-Isopropyl-4-aminobiphenyl 127750-13-4 128714-75-0,
 1,6-Dinitrobenzo[a]pyrene 128714-76-1, 3,6-Dinitrobenzo[a]pyrene
 129117-54-0, 1,4-Dimethyl-6-methoxy-3-aminocarbazole 188107-70-2,
 9-Methyl-2-nitro-9H-carbazole 188107-72-4,
 1,4,6-Trimethyl-3-nitro-9H-carbazole 189084-64-8 275795-12-5
 275795-16-9 275795-17-0 279242-09-0 279242-10-3 279242-11-4

279242-12-5 279242-14-7 279242-16-9 279242-17-0 314084-63-4,
 3,5-Diethyl-4-aminobiphenyl 345667-01-8 345667-02-9 345667-57-4
 345667-58-5 345667-59-6 345667-60-9 345667-61-0 345667-62-1
 389104-53-4, 1-Ethyl-2-aminonaphthalene 389104-54-5 389104-55-6,
 1-tert-Butyl-2-aminonaphthalene 389104-56-7, 1-Ethyl-2-aminofluorene
 389104-57-8, 1-Isopropyl-2-aminofluorene 389104-58-9,
 1-Butyl-2-aminofluorene 389104-59-0, 1-tert-Butyl-2-aminofluorene
 389104-60-3, 3-Ethyl-4-aminobiphenyl 389104-61-4,
 3-Butyl-4-aminobiphenyl 389104-62-5, 3,5-Diisopropyl-4-aminobiphenyl
 RL: ADV (Adverse effect, including toxicity); PRP (Properties); BIOL
 (Biological study)

(identification of structural requirements for mutagenicity, by
 incorporating mol. flexibility and metabolic activation of chems. in
 general Ames mutagenicity model)

RE.CNT 81 THERE ARE 81 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L9 ANSWER 10 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:977103 CAPLUS

DN 145:356920

ED Entered STN: 21 Sep 2006

TI Preparation of hydroxymethylboron derivatives for hydroxymethylation or alkoxy-methylation of aromatic rings

IN Tanaka, Keigo; Inoue, Satoshi; Ito, Daisuke; Murai, Norio; Kaburagi, Yosuke; Shirotori, Shuji; Suzuki, Shuichi; Ohashi, Yoshiaki

PA Eisai R & D Management Co., Ltd., Japan

SO PCT Int. Appl., 92pp.

CODEN: PIXXD2

DT Patent

LA Japanese

CC 29-4 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 21, 25

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006098270	A1	20060921	WO 2006-JP304894	20060313

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AI, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

EP 1867650 A1 20071219 EP 2006-715617 20060313

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR

JP 4198742 B2 20081217 JP 2007-508123 20060313

IN 2007/CN04533 A 20080125 IN 2007-CN4533 20071012

US 20080242859 A1 20081002 US 2008-886340 20080602

PRAI JP 2005-70607 A 20050314

JP 2005-294589 A 20051007

WO 2006-JP304894 W 20060313

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2006098270	IPCI	C07F0005-02 [I,A]; C07F0005-00 [I,C*]
	IPCR	C07F0005-00 [I,C]; C07F0005-02 [I,A]
	ECLA	C07F0005/02
EP 1867650	IPCI	C07F0005-02 [I,A]; C07F0005-00 [I,C*]
	IPCR	C07F0005-00 [I,C]; C07F0005-02 [I,A]
	ECLA	C07F0005/02
JP 4198742	IPCI	C07F0005-02 [I,A]; C07F0005-00 [I,C*]
IN 2007/CN04533	IPCI	C07F0005-02 [ICM,7]; C07F0005-00 [ICM,7,C*]
US 20080242859	IPCI	C07F0005-02 [I,A]; C07F0005-00 [I,C*]
	NCL	544/069.000; 544/229.000; 546/013.000; 548/405.000; 549/213.000; 560/122.000; 560/125.000; 564/008.000; 568/006.000

OS MARPAT 145:356920

AB This document discloses boron compds. or salts or solvates thereof for the hydroxymethylation and alkoxyethylation of aromatic rings. For example, claimed are compds. represented by XCH2BF3M [M = alkali metal, etc.; X = (un)substituted alkyl, (un)substituted cycloalkyl, (un)substituted non-aromatic heterocyclic ring, etc.]. Thus, potassium methoxymethyl trifluoroborate (I) was prepared in 2 steps from tributyltin hydride and chloromethyl Me ether. I was used in the preparation of 1-methoxymethyl-4-nitrobenzene from 4-nitrophenyl trifluoromethanesulfonate.

ST hydroxymethylboron deriv prepn arom ring hydroxymethylation alkoxyethylation; methoxymethylnitrobenzene prepn; nitrophenyl trifluoromethanesulfonate reaction potassium methoxymethyl trifluoroborate

IT Methylation (alkoxy-; preparation of hydroxymethylboron derivs. for hydroxymethylation or alkoxyethylation of aromatic rings)

IT Hydroxymethylation (preparation of hydroxymethylboron derivs. for hydroxymethylation or alkoxyethylation of aromatic rings)

IT Aromatic compounds RL: RCT (Reactant); RACT (Reactant or reagent) (preparation of hydroxymethylboron derivs. for hydroxymethylation or alkoxyethylation of aromatic rings)

IT 167-63-0, 2-Propanol, reactions 71-36-3, 1-Butanol, reactions 74-88-4, iodomethane, reactions 74-95-3, Dibromomethane 75-98-9, Pivalic acid 78-83-1, reactions 92-66-0, 4-Bromobiphenyl 97-99-4,

Tetrahydrofurfuryl alcohol 99-90-1, 4'-Bromoacetophenone 106-52-5,
 4-Hydroxy-1-methylpiperidine 107-21-1, Ethylene glycol, reactions
 107-30-2, Chloromethyl methyl ether 108-01-0, 2-
 Dimethylaminoethanol 127-08-2 141-53-7, Sodium formate
 516-12-1, N-Iodosuccinimide 578-57-4, 2-Bromoanisole 583-70-0,
 4-Bromo-m-xylene 593-71-5, Chloriodomethane 619-42-1, Methyl
 4-bromobenzoate 622-40-2, N-(2-Hydroxyethyl)morpholine 626-60-8,
 3-Chloropyridine 688-73-3, Tributyltin hydride 865-47-4 1333-83-1,
 Sodium hydrogen fluoride 1589-49-7, 3-Methoxy-1-propanol 1817-88-5,
 2-(Cyclohexyloxy)ethanol 2051-62-9, 4-Chlorobiphenyl 2052-49-5,
 Tetraethylammonium hydroxide 2081-44-9 2398-37-0, 3-Bromoanisole
 2516-33-8, Cyclopropylmethanol 2842-38-8, N-Cyclohexylethanamine
 2919-23-5, Cyclobutanol 3040-44-6, 1-Piperidineethanol 3188-13-4,
 Ethoxymethyl chloride 3400-45-1, Cyclopentanecarboxylic acid
 3970-21-6, 2-Methoxyethoxymethyl chloride 4441-30-9,
 N-(3-Hydroxypropyl)morpholine 5332-24-1, 3-Bromoquinoline 5419-55-6,
 Triisopropylborate 5464-12-0, 1-(2-Hydroxyethyl)-4-methylpiperazine
 7789-29-9, Potassium hydrogen fluoride 13195-50-1,
 2-Bromo-5-nitrothiophene 13330-96-6, 4-(Dimethylamino)-1-butanol
 17763-80-3, 4-Nitrophenyl trifluoromethanesulfonate 30525-89-4,
 Paraformaldehyde 41492-05-1, 1-Bromo-4-butylbenzene 109431-87-0
 910251-09-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of hydroxymethylboron derivs. for hydroxymethylation or
 alkoxyethylation of aromatic rings)

IT 910251-10-4P 910251-11-5P 910251-13-7P 910251-14-8P 910251-15-9P
 910251-18-2P 910251-28-4P 910251-34-2P 910251-35-3P 910251-38-6P

RL: RCT (Reactant); RGT (Reagent); SPN (Synthetic preparation); PREP
 (Preparation); RACT (Reactant or reagent)

(preparation of hydroxymethylboron derivs. for hydroxymethylation or
 alkoxyethylation of aromatic rings)

IT 1067-44-3P 2842-41-3P 27490-32-0P 27490-33-1P 66222-29-5P,
 Tributyliodomethyltin 83622-42-8P 166330-03-6P 201475-11-8P
 393863-16-6P 393863-17-7P 910251-47-7P 910251-48-8P 910251-49-9P
 910251-50-2P 910251-51-3P 910251-52-4P 910251-53-5P 910251-54-6P
 910251-55-7P 910251-56-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)

(preparation of hydroxymethylboron derivs. for hydroxymethylation or
 alkoxyethylation of aromatic rings)

IT 910251-12-6P 910251-16-0P 910251-17-1P 910251-19-3P 910251-20-6P
 910251-22-8P 910251-23-9P 910251-24-0P 910251-25-1P 910251-26-2P
 910251-27-3P 910251-29-5P 910251-30-8P 910251-31-9P 910251-32-0P
 910251-33-1P 910251-36-4P 910251-37-5P

RL: RGT (Reagent); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)

(preparation of hydroxymethylboron derivs. for hydroxymethylation or
 alkoxyethylation of aromatic rings)

IT 100-55-0P, 3-Pyridinemethanol 1515-83-9P 1719-82-0P 3597-91-9P,
 [1,1'-Biphenyl]-4-methanol 21998-86-7P 22072-50-0P 72390-19-3P
 859842-81-2P 910251-39-7P 910251-40-0P 910251-41-1P 910251-42-2P
 910251-43-3P 910251-44-4P 910251-45-5P 910251-46-6P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of hydroxymethylboron derivs. for hydroxymethylation or
 alkoxyethylation of aromatic rings)

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L9 ANSWER 11 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2006:920607 CAPLUS
 DN 145:326331
 ED Entered STN: 08 Sep 2006
 TI Method to remove resist, etch residue, and copper oxide from substrates
 having copper and low-k dielectric material
 IN Suzuki, Tomoko; Hiraga, Toshitaka; Katsuya, Yasuo; Reid, Chris
 PA Ekc Technology, Inc., USA
 SO PCT Int. Appl., 54pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 CC 76-3 (Electric Phenomena)
 Section cross-reference(s): 48
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006093770	A1	20060908	WO 2006-US6378	20060224
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AI, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	US 20060199749	A1	20060907	US 2006-360810	20060224
	EP 1853973	A1	20071114	EP 2006-735866	20060224
	R: DE, FR, GB				
	JP 2008532289	T	20080814	JP 2007-557148	20060224
	JP 2008277718	A	20081113	JP 2007-147428	20070507
	KR 2007106038	A	20071031	KR 2007-721898	20070921
	CN 101228481	A	20080723	CN 2006-80013538	20071022
PRAI	US 2005-656169P	P	20050225		
	WO 2006-US6378	W	20060224		

CLASS	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	WO 2006093770	IPCI	G03F0007-42 [I,A]; H01L0021-3213 [I,A]; H01L0021-02 [I,C*]
		IPCR	G03F0007-42 [I,C]; G03F0007-42 [I,A]; H01L0021-02 [I,C]; H01L0021-3213 [I,A]
		ECLA	G03F007/42L3; C11D007/26E; C11D007/50A; C11D011/00B2D8; G03F007/42L2; H01L021/02F4B2; H01L021/02F4D2; H01L021/311C2; H01L021/3213C2
	US 20060199749	IPCI	C11D0007-32 [I,A]; C11D0007-22 [I,C*]
		NCL	510/175.000
		ECLA	C11D007/10; C11D007/26C; C11D007/26E; C11D007/32B; C11D007/32E; C11D007/36; C11D011/00B2D8
	EP 1853973	IPCI	G03F0007-42 [I,A]; H01L0021-3213 [I,A]; H01L0021-02 [I,C*]
		IPCR	G03F0007-42 [I,C]; G03F0007-42 [I,A]; H01L0021-02 [I,C]; H01L0021-3213 [I,A]
		ECLA	G03F007/42L3; C11D007/26E; C11D007/50A; C11D011/00B2D8; G03F007/42L2; H01L021/02F4B2; H01L021/02F4D2; H01L021/311C2; H01L021/3213C2
	JP 2008532289	IPCI	H01L0021-304 [I,A]; C11D0007-26 [I,A]; C11D0007-50 [I,A]; C11D0007-32 [I,A]; C11D0007-10 [I,A];

C11D0007-08 [I,A]; C11D0007-02 [I,C*]; C11D0007-36 [I,A]; C11D0007-22 [I,C*]; H01L0021-3213 [I,A]; H01L0021-3205 [I,A]; H01L0021-02 [I,C*]; H01L0023-52 [I,A]

FTERM 4H003/DA15; 4H003/EA05; 4H003/EB07; 4H003/EB08; 4H003/EB13; 4H003/EB14; 4H003/EB21; 4H003/EB24; 4H003/ED02; 4H003/ED29; 4H003/FA28; 5F033/HH11; 5F033/QQ93; 5F033/QQ94; 5F033/RR04; 5F033/SS04; 5F033/WW00; 5F033/WW03; 5F033/WW04; 5F033/XX01; 5F033/XX21; 5F157/AA32; 5F157/AA35; 5F157/AA63; 5F157/AA64; 5F157/AA69; 5F157/AA70; 5F157/AA93; 5F157/AA96; 5F157/AB02; 5F157/AB03; 5F157/AB89; 5F157/AC01; 5F157/BB01; 5F157/BB08; 5F157/BB11; 5F157/BB66; 5F157/BB73; 5F157/BC03; 5F157/BC05; 5F157/BC07; 5F157/BC12; 5F157/BC54; 5F157/BD02; 5F157/BD03; 5F157/BD52; 5F157/BE12; 5F157/BE42; 5F157/BF12; 5F157/BF22; 5F157/BF38; 5F157/BH21; 5F157/CA03; 5F157/CB02; 5F157/CB03; 5F157/CB16; 5F157/CB23; 5F157/CE05; 5F157/CE36; 5F157/DA21; 5F157/DB03; 5F157/DB57; 5F157/DC86

JP 2008277718 IPCI H01L0021-304 [I,A]; G03F0007-42 [I,A]; C11D0007-16 [I,A]; C11D0007-10 [I,A]; C11D0007-08 [I,A]; C11D0007-02 [I,C*]; C11D0007-36 [I,A]; C11D0007-22 [I,C*]; C11D0007-50 [I,A]; H01L0021-027 [I,A]; H01L0021-02 [I,C*]

FTERM 2H096/AA25; 2H096/LA03; 4H003/BA12; 4H003/DA15; 4H003/DB03; 4H003/EA05; 4H003/EA08; 4H003/EB14; 4H003/EB24; 4H003/ED29; 4H003/FA28; 5F046/MA02; 5F157/AA34; 5F157/AA35; 5F157/AA46; 5F157/AA63; 5F157/AA64; 5F157/AB02; 5F157/AB03; 5F157/AC01; 5F157/BB01; 5F157/BB11; 5F157/BB73; 5F157/BC03; 5F157/BC07; 5F157/BC12; 5F157/BC53; 5F157/BC54; 5F157/BC55; 5F157/BD02; 5F157/BD03; 5F157/BD52; 5F157/BE12; 5F157/BE33; 5F157/BE34; 5F157/BE46; 5F157/BE48; 5F157/BE57; 5F157/BE58; 5F157/BE60; 5F157/BF12; 5F157/BF23; 5F157/BF37; 5F157/BF38; 5F157/CB02; 5F157/CB03; 5F157/CB23; 5F157/DB18

KR 2007106038 IPCI H01L0021-304 [I,A]; H01L0021-02 [I,C*]
CN 101228481 IPCI G03F0007-42 [I,A]; H01L0021-3213 [I,A]; H01L0021-02 [I,C*]

AB A variety of compns. that are particularly applicable for removing one or more of resist, etching residue, planarization residue, and Cu oxide from a substrate comprising Cu and a low-k dielec. material are described. The resist, residues, and Cu oxide are removed by contacting the substrate surface with the composition, typically for a period of 30 s to 30 min, and at a temperature between 25 and 45°. The composition includes a fluoride-providing component; at least 1% by weight of a H2O miscible organic solvent; an organic acid; and at least 8% by weight H2O. Typically the composition

further includes up to about 0.4% of one or more chelators.

ST resist cleaning etch residue copper oxide low const dielec

IT Polishing
(chemical-mech., residues from; method and compns. to remove resist, etch residue, and copper oxide from substrates having copper and low-constant dielec. material)

IT Dielectric films
(low-k; method and compns. to remove resist, etch residue, and copper oxide from substrates having copper and low-constant dielec. material)

IT Cleaning
Photoresists
(method and compns. to remove resist, etch residue, and copper oxide

from substrates having copper and low-constant dielec. material)

IT Etching
(residues from; method and compns. to remove resist, etch residue, and copper oxide from substrates having copper and low-constant dielec. material)

IT Chelating agents
(solns. containing; method and compns. to remove resist, etch residue, and copper oxide from substrates having copper and low-constant dielec. material)

IT 60-00-4, Ethylenediaminetetraacetic acid, processes 67-43-6, Diethylenetriaminepentaacetic acid
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(chelator; method and compns. to remove resist, etch residue, and copper oxide from substrates having copper and low-constant dielec. material)

IT 52-90-4, L-Cysteine, processes 56-40-6, Glycine, processes 56-41-7, L-Alanine, processes 77-92-9, Citric acid, processes 100-37-8, 2-Diethylaminoethanol 108-01-0, Dimethylaminoethanol 111-77-3, Diethylene glycol monomethyl ether 112-34-5, Diethylene glycol monobutyl ether 1320-67-8, Propylene glycol monomethyl ether 2809-21-4 4746-62-7, Hydroxyglycine 7664-39-3, Hydrogen fluoride, processes 10043-35-3, Boric acid, processes 12125-01-8, Ammonium fluoride 13598-36-2, Phosphonic acid 52125-53-8, Propylene glycol monoethyl ether
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(cleaning composition; method and compns. to remove resist, etch residue, and copper oxide from substrates having copper and low-constant dielec. material)

IT 50-81-7, Ascorbic acid, uses 64-18-6, Formic acid, uses 79-14-1, Glycolic acid, uses 87-69-4, Tartaric acid, uses 144-62-7, Oxalic acid, uses 563-96-2, Glyoxylic acid monohydrate
RL: NUU (Other use, unclassified); USES (Uses)
(cleaning composition; method and compns. to remove resist, etch residue, and copper oxide from substrates having copper and low-constant dielec. material)

IT 1344-70-3, Copper oxide
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); REM (Removal or disposal); PROC (Process)
(method and compns. to remove resist, etch residue, and copper oxide from substrates having copper and low-constant dielec. material)

IT 7440-50-8, Copper, uses
RL: DEV (Device component use); USES (Uses)
(method and compns. to remove resist, etch residue, and copper oxide from substrates having copper and low-constant dielec. material)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Kanno, I; US 2004106531 A1 2004 CAPLUS
- (2) Kanto Kagaku Kabushiki Kaisha; EP 1347339 A 2003 CAPLUS
- (3) Kanto Kagaku Kabushiki Kaisha; EP 1612611 A 2006 CAPLUS
- (4) Lee, S; US 2004038840 A1 2004 CAPLUS

L9 ANSWER 12 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:655920 CAPLUS

DN 145:124613

ED Entered STN: 07 Jul 2006

TI Preparation of carboxylic acid derivatives having three cyclic moieties as anticoagulants

IN Ishihara, Tsukasa; Miura, Masanori; Ohne, Kazuhiko; Takuwa, Tomofumi; Shirakami, Shohei; Ibuka, Ryotaro; Ohnuki, Kei; Seki, Norio; Shigenaga,

Takeshi; Hirayama, Fukushi; Hirabayashi, Akihito; Kai, Yuichiro;
 Kobayashi, Junichi; Hirasawa, Hideaki; Kondou, Atsushi; Yamada, Ken
 PA Astellas Pharma Inc., Japan
 SO PCT Int. Appl., 198 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 CC 28-17 (Heterocyclic Compounds (More Than One Hetero Atom))
 Section cross-reference(s): 1, 25, 27
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006070878	A1	20060706	WO 2005-JP24096	20051228
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
PRAI JP	2004-380131	A	20041228		

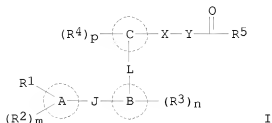
CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2006070878	IPCI	C07C0237-40 [I,A]; C07C0237-00 [I,C*]; C07C0255-13 [I,A]; C07C0255-00 [I,C*]; C07C0257-18 [I,A]; C07C0257-20 [I,A]; C07C0257-00 [I,C*]; C07C0259-18 [I,A]; C07C0259-00 [I,C*]; C07C0271-64 [I,A]; C07C0271-00 [I,C*]; C07C0307-06 [I,A]; C07C0307-10 [I,A]; C07C0307-00 [I,C*]; C07D0207-08 [I,A]; C07D0207-12 [I,A]; C07D0207-267 [I,A]; C07D0207-34 [I,A]; C07D0207-00 [I,C*]; C07D0209-14 [I,A]; C07D0209-42 [I,A]; C07D0209-00 [I,C*]; C07D0211-26 [I,A]; C07D0211-00 [I,C*]; C07D0213-30 [I,A]; C07D0213-75 [I,A]; C07D0213-81 [I,A]; C07D0213-82 [I,A]; C07D0213-84 [I,A]; C07D0213-00 [I,C*]; C07D0217-18 [I,A]; C07D0217-00 [I,C*]; C07D0231-12 [I,A]; C07D0231-00 [I,C*]; C07D0235-30 [I,A]; C07D0235-00 [I,C*]; C07D0237-24 [I,A]; C07D0237-00 [I,C*]; C07D0239-28 [I,A]; C07D0239-00 [I,C*]; C07D0241-04 [I,A]; C07D0241-08 [I,A]; C07D0241-26 [I,A]; C07D0241-00 [I,C*]; C07D0243-08 [I,A]; C07D0243-00 [I,C*]; C07D0263-32 [I,A]; C07D0263-00 [I,C*]; C07D0265-30 [I,A]; C07D0265-00 [I,C*]; C07D0271-06 [I,A]; C07D0271-10 [I,A]; C07D0271-00 [I,C*]; C07D0295-08 [I,A]; C07D0295-12 [I,A]; C07D0295-18 [I,A]; C07D0295-00 [I,C*]; C07D0307-52 [I,A]; C07D0307-00 [I,C*]; C07D0333-38 [I,A]; C07D0333-00 [I,C*]; C07D0401-04 [I,A]; C07D0401-00 [I,C*]; A61K0031-195 [I,A]; A61K0031-185 [I,C*]; A61K0031-216 [I,A]; A61K0031-27 [I,A]; A61K0031-21 [I,C*]; A61K0031-277 [I,A]; A61K0031-275 [I,C*]; A61K0031-337 [I,A]; A61K0031-40 [I,A]; A61K0031-4015 [I,A]; A61K0031-4045 [I,A]; A61K0031-415 [I,A]; A61K0031-4184 [I,A]; A61K0031-4164 [I,C*]; A61K0031-44 [I,A]; A61K0031-445 [I,A]; A61K0031-495 [I,A]; A61K0031-4965 [I,A]; A61K0031-5375 [I,A]; A61K0031-4409

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 C07D0333-38 [I,A]; C07D0401-00 [I,C]; C07D0401-04 [I,A]
 ECLA C07D211/32; C07C237/40; C07C255/13; C07C257/18;
 C07C257/20; C07C259/18; C07C271/64; C07C307/06;
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 C07D207/267; C07D207/34; C07D209/14; C07D209/42;

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 C07D401/04; M07D; M07D; M07D; M07D; M07D; M07D; M07D;
 M07D; M07D; M07D

OS MARPAT 145:124613
 GI



AB The title compds. [I; ring A = aryl or heteroaryl ring; ring B = benzene, naphthalene, or monocyclic or bicyclic heteroaryl ring; ring C = cycloalkyl, aryl, or heterocyclic ring; m, n, p = an integer of 0-3; R1 = NH2, CH2NH2, CONH2, C(:NH)NH2, C(:NOH)NH2, C(:NH)NH-CO2-(optionally substituted lower alkyl), 5-oxo-2,5-dihydro-1,2,4-oxadiazol-3-yl; R2, R3 = lower alkyl, halo-lower alkyl, halo, oxo, cyano, NO2, halo-lower alkoxy, NR0R00, SR0, S(O)R0, SO2R0, SO2NR0R00, NR0SO2R00, COR0, CO2R0, CONR0R00, NR0COR00, NR0CO-(halo-lower alkyl), cycloalkyl, aryl, heterocyclyl, etc.; R0, R00 = H, lower alkyl; R4 = lower alkyl, lower alkenyl, cycloalkyl, aryl, heterocyclyl, halo, oxo, cyano, NO2, OR6, NR6R6a, SR6, SO2R6, SO2NR6R6a, NR6SO2R6a, NR6SO2NR6R6a, NR6SO2NR6aCO2R6a, COR6, CO2R6, CONR6R6a, cycloalkyl, aryl, heterocyclyl, etc.; R6, R6a = H, each (un)substituted lower alkyl, lower alkenyl, cycloalkyl, aryl, or heterocyclyl; R5 = OR0, NR0R00, N(R0)-lower alkylene-OR00; J = NR0CO, CONR0, NR0CONR0, NR0-lower alkylene, lower alkylene-NR0CO; L = NR0-lower alkylene, NR0-lower alkenylene, lower alkylene, lower alkenylene; X = a single bond, (un)substituted NH, S, CO, SO, SO2, lower alkylene-O, lower alkylene-(un)substituted NH; Y = a single bond, each (un)substituted lower alkylene or lower alkenylene] or pharmaceutically acceptable salt thereof are prepared These compds. such as phenoxyacetic acid and phenylpropanoic acid derivs. or salts thereof have an anticoagulant effect based on the inhibition of the activated blood coagulation factor VII and, therefore, are useful as blood coagulation inhibitors or preventives/remedies for diseases caused by thrombus or embolus. They are also selective inhibitors of activated blood coagulation factor VII over activated blood coagulation factor X and thrombin. The above diseases include ischemic heart diseases, stenosis after angioplasty, cerebral thrombosis, transient cerebral ischemia, peripheral arterial obstruction, Charcot's syndrome (intermittent claudication), deep venous thrombosis, pulmonary embolism, disseminated intravascular coagulation (DIC), thrombogenesis after heart valve replacement surgery, coagulation or inflammation of circulating blood during external blood circulation, arteriosclerosis, and cancer. For example, [(3-((2-((2-amino-1H-benzimidazol-5-yl)amino)carbonyl)-4-chlorophenyl)amino)methyl]biphenyl-2-yl]oxy]acetic acid in vitro inhibited activated blood coagulation factor VII over activated blood coagulation factor X and thrombin with IC50 of 0.36, ≥100, and ≥100 μM, resp.

ST phenylpropanoic acid prepn anticoagulant; phenoxyacetic acid prepn

anticoagulant; activated blood coagulation factor VII inhibitor
phenoxyacetic acid prepn; carboxylic acid contg cyclic group prepn
anticoagulant; thrombus embolus treatment prevention phenoxyacetic acid
phenylpropanoic acid prepn

- IT Ischemia
(cardiac; preparation of carboxylic acid derivs. having three cyclic
moieties as activated blood coagulation factor VII inhibitors and
anticoagulants)
- IT Blood coagulation
(coagulation of circulating blood during external blood circulation;
preparation of carboxylic acid derivs. having three cyclic moieties as
activated blood coagulation factor VII inhibitors and anticoagulants)
- IT Artery, disease
(coronary, restenosis, after angioplasty; preparation of carboxylic acid
derivs. having three cyclic moieties as activated blood coagulation
factor VII inhibitors and anticoagulants)
- IT Blood coagulation disorders
Blood coagulation disorders
(disseminated intravascular coagulation; preparation of carboxylic acid
derivs. having three cyclic moieties as activated blood coagulation
factor VII inhibitors and anticoagulants)
- IT Lung, disease
(embolism; preparation of carboxylic acid derivs. having three cyclic
moieties as activated blood coagulation factor VII inhibitors and
anticoagulants)
- IT Anti-inflammatory agents
Inflammation
(inflammation of circulating blood during external blood circulation;
preparation of carboxylic acid derivs. having three cyclic moieties as
activated blood coagulation factor VII inhibitors and anticoagulants)
- IT Artery, disease
(intermittent claudication, Charcot's syndrome; preparation of carboxylic
acid derivs. having three cyclic moieties as activated blood
coagulation factor VII inhibitors and anticoagulants)
- IT Brain, disease
(ischemia, transient; preparation of carboxylic acid derivs. having three
cyclic moieties as activated blood coagulation factor VII inhibitors
and anticoagulants)
- IT Heart, disease
(ischemia; preparation of carboxylic acid derivs. having three cyclic
moieties as activated blood coagulation factor VII inhibitors and
anticoagulants)
- IT Artery, disease
(occlusion, peripheral; preparation of carboxylic acid derivs. having three
cyclic moieties as activated blood coagulation factor VII inhibitors
and anticoagulants)
- IT Antiartherosclerotics
Anticoagulants
Antitumor agents
Arteriosclerosis
Embolism
Neoplasm
Thrombosis
(preparation of carboxylic acid derivs. having three cyclic moieties as
activated blood coagulation factor VII inhibitors and anticoagulants)
- IT Carboxylic acids, preparation
Fatty acids, preparation
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)
(preparation of carboxylic acid derivs. having three cyclic moieties as
activated blood coagulation factor VII inhibitors and anticoagulants)

IT Embolism
(pulmonary; preparation of carboxylic acid derivs. having three cyclic moieties as activated blood coagulation factor VII inhibitors and anticoagulants)

IT Brain, disease
(stroke; preparation of carboxylic acid derivs. having three cyclic moieties as activated blood coagulation factor VII inhibitors and anticoagulants)

IT Thrombus
(thrombogenesis after heart valve replacement surgery; preparation of carboxylic acid derivs. having three cyclic moieties as activated blood coagulation factor VII inhibitors and anticoagulants)

IT Ischemia
(transient cerebral; preparation of carboxylic acid derivs. having three cyclic moieties as activated blood coagulation factor VII inhibitors and anticoagulants)

IT Thrombosis
(venous; preparation of carboxylic acid derivs. having three cyclic moieties as activated blood coagulation factor VII inhibitors and anticoagulants)

IT 65312-43-8, Activated blood coagulation factor VII
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; preparation of carboxylic acid derivs. having three cyclic moieties as activated blood coagulation factor VII inhibitors and anticoagulants)

IT 2357-33-7P, 4-Fluoro-2-(hydroxymethyl)phenol 2973-71-9P,
3-Ethoxy-5-formyl-4-hydroxybenzyl chloride 147291-56-3P, tert-Butyl
[(4-aminophenyl)(imino)methyl]carbamate 183380-81-6P, Ethyl
2-(4-hydroxy-3-nitrophenyl)acetate 286437-63-6P, tert-Butyl
2-(2-formylphenoxy)acetate 400648-67-1P, Ethyl
2-[3-nitro-4-[(trifluoromethyl)sulfonyl]oxy]phenyl]acetate
773094-22-7P, 2-(3-Methoxy-2-nitrophenyl)dioxolane 805952-10-7P,
4-[(Dimethylamino)methyl]-2-ethoxy-6-formylphenol 861442-04-8P,
4-Chloro-2-(hydroxymethyl)-6-iodophenol 897639-34-8P,
[4-(Acetoxymethyl)-2-[[[3-[[[4-
[amino(imino)methyl]phenyl]amino]carbonyl]pyridin-2-yl]amino]methyl]-6-
ethoxyphenoxy]acetic acid trifluoroacetate 897641-74-6P, tert-Butyl
2-[2-(2-hydroxyethyl)piperidin-1-yl]acetate 897641-75-7P, tert-Butyl
3-[2-(hydroxymethyl)piperidin-1-yl]propanoate 897641-76-8P, tert-Butyl
3-(2-formylpiperidin-1-yl)propanoate 897641-77-9P,
5-Cyano-3-methoxysalicylaldehyde 897641-78-0P,
6-Chloro-8-iodo-2-phenyl-4H-1,3-benzodioxin 897641-79-1P,
1-[5-Chloro-2-hydroxy-3-(hydroxymethyl)phenyl]-4-methylpiperazin-2-one
897641-80-4P, 3-Ethoxy-5-formyl-4-hydroxybenzyl acetate 897641-81-5P,
5-[(Dimethylamino)methyl]-2-hydroxy-3-isopropoxybenzaldehyde
897641-82-6P, 3-Formyl-4-hydroxy-5-isopropoxybenzyl acetate
897641-83-7P, 3,4-Dihydroxy-5-formylbenzyl acetate 897641-84-8P,
2-Hydroxy-5-iodo-3-isopropoxybenzaldehyde 897641-85-9P,
5-Formyl-2-hydroxy-3-isopropoxybenzyl acetate 897641-86-0P, tert-Butyl
2-[2-ethoxy-4-(2-hydroxyethyl)-6-(hydroxymethyl)phenoxy]acetate
897641-87-1P, tert-Butyl 2-(2-formyl-6-isopropoxy-4-vinylphenoxy)acetate
897641-88-2P, tert-Butyl 2-[4-(2-hydroxyethyl)-2-(hydroxymethyl)-6-
isopropoxyphenoxy]acetate 897641-89-3P, Ethyl
2-[4-((1S)-1,2-dihydroxyethyl)-2-formyl-6-isopropoxyphenoxy]acetate
897641-90-6P, tert-Butyl 2-[2-ethoxy-6-formyl-4-[(2-
hydroxyethyl)(methyl)amino]phenoxy]acetate 897641-91-7P, tert-Butyl
2-[4-acetoxymethyl-2-(2-tert-butoxy-1-methylethoxy)-6-
formylphenoxy]acetate 897641-92-8P, Ethyl
2-(2-acetoxymethyl-4-hydroxy-6-isopropoxyphenoxy)acetate 897641-93-9P,
Ethyl 2-[4-[(tert-butyl)dimethylsilyl]oxy]-2-hydroxymethyl-6-
isopropoxyphenoxy]acetate 897641-94-0P 897641-95-1P, tert-Butyl
(E)-3-(4-acetoxymethyl-2-formyl-6-isopropoxyphenyl)-2-propenoate

897641-96-2P, 2-Bromo-3-isopropoxy-5-nitrobenzaldehyde 897641-97-3P,
 tert-Butyl (E)-3-(2-formyl-6-isopropoxy-4-nitrophenyl)-2-propenoate
 897641-98-4P, tert-Butyl 3-(4-acetoxymethyl-2-hydroxymethyl-6-
 isopropoxyphenyl)propanoate 897641-99-5P, tert-Butyl
 3-[4-[[2-[(tert-butylidimethylsilyl)oxy]ethyl]amino]-2-hydroxymethyl-6-
 isopropoxyphenyl]propanoate 897642-00-1P, tert-Butyl
 3-[4-[(tert-butoxycarbonyl)[2-[(tert-butylidimethylsilyl)oxy]ethyl]amino]-2-
 hydroxymethyl-6-isopropoxyphenyl]propanoate 897642-01-2P, tert-Butyl
 3-[4-[(tert-butoxycarbonyl)[2-[(tert-butylidimethylsilyl)oxy]ethyl]amino]-2-
 formyl-6-isopropoxyphenyl]propanoate 897642-02-3P, Ethyl
 3-[2-formyl-4-(2-hydroxyethylamino)-6-isopropoxyphenyl]propanoate
 897642-03-4P, tert-Butyl 2-(4-acetoxymethyl-2-formyl-6-
 isopropoxyphenyl)acetate 897642-04-5P, Ethyl
 2-(2-formyl-4-hydroxymethyl-6-isopropoxyphenyl)acetate 897642-05-6P,
 3-(2-Ethoxy-6-formylphenoxy)propanoic acid 897642-06-7P, tert-Butyl
 2-[[3-formylbiphenyl-2-yl]oxy]acetate 897642-07-8P, tert-Butyl
 2-[[[2-(hydroxymethyl)phenyl]methyl](methyl)amino]acetate 897642-08-9P,
 tert-Butyl 2-[(tert-butoxycarbonyl)[2-
 (hydroxymethyl)phenyl]methyl]amino]acetate 897642-09-0P, tert-Butyl
 2-[2-(dimethylamino)-6-(hydroxymethyl)phenoxy]acetate 897642-10-3P,
 tert-Butyl 2-[2-formyl-4-(2-hydroxyethyl)-6-isopropoxyphenoxy]acetate
 897642-11-4P, tert-Butyl 2-[2-(1,3-dioxolan-2-yl)-6-
 (methylsulfanyl)phenoxy]acetate 897642-12-5P, tert-Butyl
 2-[2-(1,3-dioxolan-2-yl)-6-(methylsulfonyl)phenoxy]acetate 897642-13-6P,
 [2-Formyl-6-(methylsulfonyl)phenoxy]acetic acid 897642-14-7P, tert-Butyl
 2-[2-[2-(dimethylamino)propoxy]-6-formylphenoxy]acetate 897642-15-8P,
 tert-Butyl 2-[4-amino-2-(hydroxymethyl)-6-methoxyphenoxy]acetate
 897642-16-9P, tert-Butyl 2-[2-(hydroxymethyl)-6-methoxy-4-
 (methylamino)phenoxy]acetate 897642-17-0P, tert-Butyl
 2-[4-[(tert-butoxycarbonyl)(methyl)amino]-2-formyl-6-
 methoxyphenoxy]acetate 897642-18-1P, tert-Butyl
 2-[4-(dimethylamino)-2-formyl-6-methoxyphenoxy]acetate 897642-19-2P,
 tert-Butyl 2-[4-(acetyl amino)-2-formyl-6-methoxyphenoxy]acetate
 897642-20-5P, tert-Butyl 2-[4-[(dimethylamino)methyl]-2-ethoxy-6-
 formylphenoxy]acetate 897642-21-6P, tert-Butyl
 2-[4-[[bis(tert-butoxycarbonyl)amino]methyl]-2-ethoxy-6-
 formylphenoxy]acetate 897642-22-7P, tert-Butyl
 3-(2-formylphenyl)propanoate 897642-23-8P, tert-Butyl
 2-[(2-formyl-6-methoxyphenyl)(methyl)amino]acetate 897642-24-9P,
 N-[2-(1,3-Dioxolan-2-yl)phenyl]-2,2,2-trifluoro-N-methylacetamide
 897642-25-0P 897642-26-1P, tert-Butyl
 [[4-[(2-amino-5-chlorobenzyl)amino]phenyl](imino)methyl]carbamate
 897642-27-2P, 2-[[2-(2-tert-Butoxy-2-oxoethoxy)benzyl]amino]-5-
 chlorobenzoic acid 897642-28-3P, Ethyl
 [[4-(aminophenyl)(imino)methyl]carbamate 897642-29-4P, Ethyl
 2-(3-nitro-4-vinylphenyl)acetate 897642-30-7P, Ethyl
 2-(4-formyl-3-nitrophenyl)acetate 897642-31-8P,
 4-[(Ethoxycarbonyl)methyl]-2-nitrobenzoic acid 897642-32-9P, tert-Butyl
 2-[2-[[[2-[[[4-[(tert-butoxycarbonyl)amino]methyl]phenyl]amino]carbonyl]-
 4-chlorophenyl]amino]methyl]-6-ethoxyphenoxy]acetate 897642-33-0P,
 tert-Butyl [[4-[(5-chloro-2-
 nitrobenzoyl)amino]phenyl](imino)methyl]carbamate 897642-34-1P,
 tert-Butyl [[5-[(5-chloro-2-nitrobenzoyl)amino]pyridin-2-
 yl](imino)methyl]carbamate 897642-35-2P, tert-Butyl
 [[4-[[4-(2-amino-2-oxoethyl)-2-
 nitrobenzoyl]amino]phenyl](imino)methyl]carbamate 897642-36-3P,
 N-[4-[(Amino)(hydroxyimino)methyl]phenyl]-5-chloro-2-nitrobenzamide
 897642-38-5P 897642-39-6P 897642-40-9P, Hexyl
 [imino]4-[(5-methyl-2-nitrobenzoyl)amino]phenyl]methyl]carbamate
 897642-41-0P, tert-Butyl 2-[2-ethoxy-6-
 [(hydroxyimino)methyl]phenoxy]acetate 897642-42-1P, tert-Butyl
 [[4-[(2-amino-5-chlorobenzoyl)amino]phenyl](imino)methyl]carbamate

897642-43-2P, 2-Amino-N-[4-[(amino)(hydroxyimino)methyl]phenyl]-5-methylbenzamide 897642-44-3P, tert-Butyl
 [4-[(2-amino-5-bromobenzoyl)amino]phenyl](imino)methyl]carbamate
 897642-45-4P, tert-Butyl 2-[2-[[4-chloro-2-nitrophenyl]amino]methyl]-6-ethoxyphenoxy]acetate 897642-46-5P, tert-Butyl
 2-[2-[[4-chloro-2-[(4-cyanobenzoyl)amino]phenyl]amino]methyl]-6-ethoxyphenoxy]acetate 897642-47-6P, Ethyl
 2-[2-formyl-4-(hydroxymethyl)-6-isopropoxyphenoxy]acetate 897642-48-7P, 2-Benzoyloxy-3-(2-tert-butoxy-1-methylethoxy)benzaldehyde 897642-49-8P, 3-(2-tert-butoxy-1-methylethoxy)-2-hydroxybenzaldehyde 897642-50-1P
 897642-51-2P 897642-52-3P, tert-Butyl
 (E)-3-[4-acetoxymethyl-2-(2-acetoxy-1-methylethoxy)-6-formylphenyl]-2-propenoate 897643-90-2P, 1-(6-Chloro-2-phenyl-4H-1,3-benzodioxin-8-yl)-4-methylpiperazin-2-one 897643-92-4P, Ethyl
 2-(2-acetoxymethyl-4-formyloxy-6-isopropoxyphenoxy)acetate 897643-93-5P, Ethyl 2-[4-[(tert-butyldimethylsilyl)oxy]-2-(acetoxymethyl)-6-isopropoxyphenoxy]acetate 897643-95-7P,
 (4-Acetoxymethyl-2-formyl-6-isopropoxyphenyl)acetic acid 897643-96-8P, tert-Butyl 2-(2-formyl-6-hydroxyphenoxy)acetate 897643-97-9P, tert-Butyl 2-[2-formyl-6-[(trifluoromethylsulfonyl)oxy]phenoxy]acetate 897643-98-0P, tert-Butyl 2-[[2-(acetoxymethyl)phenyl]methyl](methyl)amino]acetate 897643-99-1P, tert-Butyl 2-[[2-(acetoxymethyl)phenyl]methyl]amino]acetate 897644-00-7P, tert-Butyl 2-[(tert-butoxycarbonyl)[2-(acetoxymethyl)phenyl]methyl]amino]acetate 897644-01-8P, tert-Butyl 2-[4-fluoro-2-(hydroxymethyl)phenoxy]acetate 897644-02-9P, tert-Butyl 2-(4-fluoro-2-formylphenoxy)acetate 897644-03-0P, tert-Butyl 2-(2-ethoxy-6-formyl-4-hydroxymethylphenoxy)acetate 897644-04-1P, 2-[3-Methoxy-2-[(trifluoroacetyl)amino]phenyl]dioxolane 897644-05-2P, 2-[3-Methoxy-2-[N-(trifluoroacetyl)-N-methylamino]phenyl]dioxolane 897644-06-3P, 2-[3-Methoxy-2-(methylamino)phenyl]dioxolane 897644-07-4P, tert-Butyl 2-[[2-(dioxolan-2-yl)-6-methoxyphenyl](methyl)amino]acetate 897644-10-9P, N-[2-(Dioxolan-2-yl)phenyl]-2,2,2-trifluoroacetamide 897644-12-1P, N-[2-(Dioxolan-2-yl)phenyl]-N-methylamine 897644-13-2P, tert-Butyl [4-[(2-nitro-5-chlorobenzyl)amino]phenyl](imino)methyl]carbamate 897644-15-4P, [4-[[4-[(tert-Butoxycarbonyl)amino](imino)methyl]phenyl]carbamoyl]-3-nitrophenyl]acetic acid 897644-20-1P, tert-Butyl 2-[2-[1-[(4-chloro-2-hydroxymethylphenyl)amino]ethyl]phenoxy]acetate 897644-21-2P, tert-Butyl 2-[2-[1-[(4-chloro-2-carboxyphenyl)amino]ethyl]phenoxy]acetate 897644-22-3P, tert-Butyl 2-[2-[1-[(4-chloro-2-[[4-[(tert-butoxycarbonyl)amino]methyl]phenyl]amino]carbonyl]phenyl]amino]ethyl]phenoxy]acetate 897644-28-9P, tert-Butyl [4-[[2-[[2-(ethoxycarbonylmethoxy)-3-isopropoxy-5-[(tert-butyldimethylsilyl)oxy]phenyl]methyl]amino]-5-methylbenzoyl]amino]phenyl](imino)methyl]carbamate 897644-29-0P, tert-Butyl [4-[[2-[[2-(ethoxycarbonylmethoxy)-3-isopropoxy-5-hydroxyphenyl]methyl]amino]-5-methylbenzoyl]amino]phenyl](imino)methyl]carbamate 897644-30-3P, tert-Butyl 2-[4-acetoxymethyl-2-[[2-[[4-[(tert-butoxycarbonyl)amino](imino)methyl]phenyl]amino]carbonyl]-4-methylphenyl]amino]methyl]-6-(2-tert-butoxy-1-methylethoxy)phenoxy]acetate 897644-35-8P, 3-[2-[[2-2-(tert-Butoxycarbonyl)ethyl]-4-[[2-[(tert-butyldimethylsilyl)oxy]ethyl](tert-butoxycarbonyl)amino]-3-isopropoxyphenyl]amino]methyl]-4-(hydroxymethyl)-6-isopropoxyphenyl]propanoic acid ethyl ester 897644-39-2P, Ethyl 2-[2-[[2-[[4-[(amino)(hydroxyimino)methyl]phenyl]amino]carbonyl]-4-methylphenyl]amino]methyl]-4-[(tert-butyldimethylsilyl)oxy]-6-isopropoxyphenoxy]acetate 897644-40-5P, Ethyl [4-[[2-[[5-(acetoxymethyl)-2-[(tert-butoxycarbonyl)methyl]phenyl]methyl]amino]-5-

methylbenzoyl]amino]phenyl] (imino)methyl]carbamate 897644-46-1P,
 tert-Butyl 2-[4-[[2-[(tert-butoxycarbonyl)amino]ethanoyl]amino]-2-[[4-
 chloro-2-[[[4-(amino)(hydroxyimino)methyl]phenyl]amino]carbonyl]phenyl]am
 ino]methyl]-6-isopropoxyphenoxy]acetate 897644-50-7P, Ethyl
 3-[4-(2-acetoxyacetyl)amino)-2-[[2-[[[4-
 [(amino)(hydroxyimino)methyl]phenyl]amino]carbonyl]-4-
 methylphenyl]amino]methyl]-6-isopropoxyphenyl]propanoate 897644-51-8P,
 tert-Butyl 2-[2-[[2-[[[4-[[[(tert-
 butoxycarbonyl)amino](imino)methyl]phenyl]amino]carbonyl]-4-
 chlorophenyl]amino]methyl]-6-ethoxyphenoxy]acetate 897644-52-9P,
 tert-Butyl 2-[2-[[[2-[[[4-[[[(tert-
 butoxycarbonyl)amino](imino)methyl]phenyl]amino]carbonyl]-4-
 chlorophenyl]amino]methyl]-6-[2-(methylanino)-2-oxoethoxy]phenoxy]acetate
 897644-54-1P, Ethyl 2-[4-acetoxymethyl-2-[[[2-[[[4-[[[(tert-
 butoxycarbonyl)amino](imino)methyl]phenyl]amino]carbonyl]-4-
 methylphenyl]amino]methyl]-6-propoxyphenoxy]acetate 897644-55-2P,
 N-[2-[[[2-[[[4-[[[(tert-Butoxycarbonyl)amino](imino)methyl]phenyl]amino]car
 bonyl]-4-chlorophenyl]amino]methyl]phenyl]-N-methylglycine
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)

(intermediate; preparation of carboxylic acid derivs. having three cyclic
 moieties as activated blood coagulation factor VII inhibitors and
 anticoagulants)

IT 897631-81-1P, tert-Butyl 2-[2-[[[2-[[[4-[[[(tert-
 butoxycarbonyl]amino](imino)methyl]phenyl]amino]carbonyl]-4-
 chlorophenyl]amino]methyl]-6-hydroxyphenoxy]acetate 897631-88-8P,
 tert-Butyl 2-[2-[[[2-[[[6-[amino(imino)methyl]pyridin-3-yl]amino]carbonyl]-
 4-chlorophenyl]amino]methyl]-6-ethoxyphenoxy]acetate formate
 897632-09-6P, [3-[[[2-[[[4-[[[(tert-
 Butoxycarbonyl]amino](imino)methyl]phenyl]amino]carbonyl]-4-
 chlorophenyl]amino]methyl]-2-(2-tert-butoxy-2-oxoethoxy)phenoxy]acetic
 acid 897632-62-1P 897632-74-5P 897632-78-9P 897632-85-8P
 897632-89-2P 897632-95-0P 897639-97-3P 897640-72-1P 897640-75-4P
 897641-61-1P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic
 preparation); THU (Therapeutic use); BIOL (Biological study); PREP
 (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of carboxylic acid derivs. having three cyclic moieties as
 activated blood coagulation factor VII inhibitors and anticoagulants)

IT 897631-80-0P, tert-Butyl 2-[2-[[[2-[[[4-[[[(tert-
 butoxycarbonyl]amino](imino)methyl]phenyl]amino]carbonyl]-4-
 cyanophenyl]amino]methyl]-6-ethoxyphenoxy]acetate 897631-82-2P,
 tert-Butyl 2-[2-[[[2-[[[4-[[[(tert-
 butoxycarbonyl]amino](imino)methyl]phenyl]amino]carbonyl]-4-
 chlorophenyl]amino]methyl]-6-[(1-methylpyrrolidin-2-
 yl)methoxy]phenoxy]acetate 897631-83-3P, tert-Butyl
 2-[4-amino-2-[[[2-[[[4-[[[(tert-
 butoxycarbonyl]amino](imino)methyl]phenyl]amino]carbonyl]-4-
 chlorophenyl]amino]methyl]-6-methoxyphenoxy]acetate 897631-84-4P, Ethyl
 2-[2-[[[2-[[[4-[[amino(imino)methyl]benzoyl]amino]-4-
 chlorophenyl]amino]methyl]-6-ethoxyphenoxy]acetate 897631-85-5P,
 tert-Butyl 2-[2-[[[2-[[[4-[[[(tert-
 butoxycarbonyl]amino](imino)methyl]phenyl]amino]carbonyl]-4-
 chlorophenyl]amino]methyl]-4-chloro-6-(4-methyl-2-oxopiperazin-1-
 yl)phenoxy]acetate 897631-86-6P, Ethyl
 2-[2-[[[2-[[[4-[[amino](hydroxyimino)methyl]phenyl]amino]carbonyl]-4-
 chlorophenyl]amino]methyl]-6-ethoxyphenoxy]acetate 897631-90-2P,
 tert-Butyl 2-[2-[[[2-[[[6-[amino(imino)methyl]pyridin-3-
 yl]amino]carbonyl]phenyl]amino]methyl]-6-ethoxyphenoxy]acetate
 formate 897631-91-3P, tert-Butyl
 2-[2-[[[2-[[[4-[[amino(imino)methyl]phenyl]amino]carbonyl]-4-
 chlorophenyl]amino]methyl]phenoxy]acetate 897631-92-4P, Ethyl

3-[2-[[[2-[[[4-[(amino) (hydroxyimino)methyl]phenyl]amino]carbonyl]-4-chlorophenyl]amino]methyl]piperidin-1-yl]propanoate 897631-94-6P,
 [2-[[[2-[[[4-[Amino(imino)methyl]phenyl]phenyl]amino]carbonyl]-4-chlorophenyl]amino]methyl]phenoxy]acetic acid trifluoroacetate
 897631-95-7P, [2-[[[2-[[[4-[Amino(imino)methyl]phenyl]phenyl]amino]carbonyl]-4-chlorophenyl]amino]methyl]-6-(2-(dimethylamino)ethoxy]phenoxy]acetic acid hydrochloride 897631-97-9P, [2-[[[2-[[[4-[Amino(imino)methyl]phenyl]amino]carbonyl]-4-chlorophenyl]amino]methyl]-6-[[3-methyloxetan-3-yl]methoxy]phenoxy]acetic acid trifluoroacetate
 897631-98-0P, [2-[[[2-[[[4-(Aminomethyl)phenyl]amino]carbonyl]-4-chlorophenyl]amino]methyl]-6-ethoxyphenoxy]acetic acid hydrochloride
 897631-99-1P, [13-[[[2-[[[2-Amino-1H-benzimidazol-5-yl]amino]carbonyl]-4-chlorophenyl]amino]methyl]biphenyl-2-yl]oxy]acetic acid 897632-01-8P,
 4-[2-[[[2-[[[4-[Amino(imino)methyl]phenyl]amino]carbonyl]-4-chlorophenyl]amino]methyl]piperidin-1-yl]butyric acid formate
 897632-03-0P, 3-[2-[[[2-[[[4-[Amino(imino)methyl]phenyl]amino]carbonyl]-4-chlorophenyl]amino]methyl]piperidin-1-yl]propanoic acid formate
 897632-04-1P, [2-[[[2-[[[4-(Aminomethyl)phenyl]amino]carbonyl]-4-chlorophenyl]amino]ethyl]phenoxy]acetic acid hydrochloride 897632-06-3P,
 [2-[[[2-[[[6-[Amino(imino)methyl]pyridin-3-yl]amino]carbonyl]-4-chlorophenyl]amino]methyl]-6-ethoxyphenoxy]acetic acid trifluoroacetate
 897632-08-5P, [2-[[[2-[[[4-[Amino(imino)methyl]phenyl]amino]carbonyl]-4-chlorophenyl]amino]methyl]-6-(aminomethyl]phenoxy]acetic acid trifluoroacetate 897632-10-9P, tert-Butyl
 2-[2-[[[2-[[[4-[[tert-butoxycarbonyl]amino] (imino)methyl]phenyl]amino]carbonyl]-4-chlorophenyl]amino]methyl]-4-[[[tert-butoxycarbonyl]amino]sulfonyl]amino]-6-isopropoxyphenoxy]acetate
 897632-12-1P, 3-[[[4-[Amino(imino)methyl]phenyl]amino]carbonyl]-4-[[2-(2-carboxyethoxy)-3-ethoxybenzyl]amino]benzoic acid formate
 897632-13-2P, [2-[[[2-[[[4-[Amino(imino)methyl]phenyl]amino]carbonyl]-4-chlorophenyl]amino]methyl]-6-ethoxy-4-(2-hydroxyethyl) (methyl)amino]phenoxy]acetic acid hydrochloride
 897632-14-3P, [2-[[[2-[[[4-[Amino(imino)methyl]phenyl]amino]carbonyl]-4-methoxyphenyl]amino]methyl]-4-(hydroxymethyl)-6-isopropoxyphenoxy]acetic acid 897632-15-4P, [2-[[[2-[[[4-[Amino(imino)methyl]phenyl]amino]carbonyl]-4-chlorophenyl]amino]methyl]-4-((1R)-1,2-dihydroxyethyl)-6-ethoxyphenoxy]acetic acid 897632-16-5P,
 Ethyl 3-[2-[[[3-[[[4-[[ethoxycarbonyl]amino] (imino)methyl]phenyl]amino]carbonyl]-5-methylpyridin-2-yl]amino]methyl]-4-(hydroxymethyl)-6-isopropoxyphenyl]propanoate 897632-18-7P,
 3-[2-[[[2-[[[2-[Amino(imino)methyl]pyrimidin-5-yl]amino]carbonyl]-4-methylphenyl]amino]methyl]-4-(hydroxymethyl)-6-isopropoxyphenyl]propanoic acid formate 897632-20-1P,
 [2-[[[2-[[[4-[Amino(imino)methyl]phenyl]amino]carbonyl]-4-methylphenyl]amino]methyl]-4-hydroxy-6-isopropoxyphenoxy]acetic acid formate 897632-22-3P, [2-[[[2-[[[4-[Amino(imino)methyl]phenyl]amino]carbonyl]-4-methylphenyl]amino]methyl]-4-(hydroxymethyl)-6-(2-hydroxy-1-methylethoxy]phenoxy]acetic acid formate 897632-24-5P, [2-[[[2-[[[4-[Amino(imino)methyl]phenyl]amino]carbonyl]-4-methylphenyl]amino]methyl]-4-(hydroxymethyl]phenoxy]acetic acid formate 897632-25-6P,
 [[2-[[[2-[[[4-[Amino(imino)methyl]phenyl]amino]carbonyl]-4-chlorophenyl]amino]methyl]-6-methoxyphenyl]amino]acetic acid 897632-27-8P, Ethyl 3-[2-[[[2-[[[4-[amino] (imino)methyl]phenyl]amino]carbonyl]-4-methylphenyl]amino]methyl]-4-(hydroxymethyl)-6-isopropoxyphenyl]propanoate formate
 897632-28-9P, 3-[2-[[[3-[[[4-[Amino(imino)methyl]phenyl]amino]carbonyl]-5-methylpyridin-2-yl]amino]methyl]-4-(hydroxymethyl)-6-isopropoxyphenyl]propanoic acid hydrochloride 897632-30-3P,
 3-[2-[[[2-[[[4-[Amino(imino)methyl]phenyl]amino]carbonyl]-4-methylphenyl]amino]methyl]-4-(2-hydroxyethyl]amino]-6-isopropoxyphenyl]propanoic acid formate 897632-31-4P,

2-[[[3-[[[4-[Amino(imino)methyl]phenyl]amino]carbonyl]pyridin-2-yl]amino]methyl]-6-ethoxy-4-(hydroxymethyl)phenoxy]acetic acid hydrochloride 897632-32-5P, Ethyl
 2-[2-[[[2-[[[4-[(amino)(hydroxyimino)methyl]phenyl]amino]carbonyl]-4-chlorophenyl]amino]methyl]-4-(hydroxymethyl)-6-isopropoxyphenoxy]acetate hydrochloride 897632-33-6P, Methyl
 2-[2-[[[2-[[[4-[(amino)(hydroxyimino)methyl]phenyl]amino]carbonyl]-4-methylphenyl]amino]methyl]-4-hydroxymethyl-6-isopropoxyphenoxy]acetate hydrochloride 897632-34-7P, Ethyl
 2-[2-[[[2-[[[4-[(amino)(hydroxyimino)methyl]phenyl]amino]carbonyl]-4-methylphenyl]amino]methyl]-4-hydroxy-6-isopropoxyphenoxy]acetate 897632-35-8P, Ethyl 2-[2-[[[2-[[[6-[(amino)(hydroxyimino)methyl]pyridin-3-yl]amino]carbonyl]phenyl]amino]methyl]-4-hydroxymethyl-6-isopropoxyphenoxy]acetate 897632-36-9P,
 [2-[[[2-[[[4-[(Ethoxycarbonyl)amino](imino)methyl]phenyl]amino]carbonyl]-4-methylphenyl]amino]methyl]-4-(hydroxymethyl)-6-isopropoxyphenyl]acetic acid 897632-37-0P, 3-[[[2-[[[4-[Amino(imino)methyl]phenyl]amino]carbonyl]-4-chlorophenyl]amino]methyl]-4-(carboxymethoxy)-5-ethoxybenzoic acid hydrochloride 897632-38-1P, Ethyl 2-[2-[[[2-[[[4-[(amino)(hydroxyimino)methyl]phenyl]amino]carbonyl]-4-fluorophenyl]amino]methyl]-4-(hydroxymethyl)-6-isopropoxyphenoxy]acetate 897632-39-2P, Ethyl 3-[2-[[[3-[[[4-[[[4-[(ethoxycarbonyl)amino](imino)methyl]phenyl]amino]carbonyl]pyridin-2-yl]amino]methyl]-4-(hydroxymethyl)-6-isopropoxyphenyl]propanoate 897632-40-5P, Ethyl 2-[2-[[[2-[[[6-[(amino)(hydroxyimino)methyl]pyridin-3-yl]amino]carbonyl]-4-methylphenyl]amino]methyl]-4-(hydroxymethyl)-6-isopropoxyphenoxy]acetate hydrochloride 897632-41-6P, Ethyl 3-[2-[[[3-[[[4-[(amino)(hydroxyimino)methyl]phenyl]amino]carbonyl]-5-methylpyridin-2-yl]amino]methyl]-4-(hydroxymethyl)-6-isopropoxyphenyl]propanoate hydrochloride 897632-42-7P, N-[4-[(Amino)(hydroxyimino)methyl]phenyl]-2-[[[2-[[[2-[(hydroxyethyl)(methyl)amino]-2-oxoethoxy]-5-(hydroxymethyl)-3-isopropoxybenzyl]amino]-5-methylbenzamide 897632-43-8P, 3-[2-[[[2-[[[4-[[[4-[(Ethoxycarbonyl)amino](imino)methyl]phenyl]amino]carbonyl]-4-methylphenyl]amino]methyl]-4-(hydroxymethyl)-6-isopropoxyphenyl]propanoic acid 897632-44-9P,
 [2-[[[2-[[[4-[(Amino)(hydroxyimino)methyl]phenyl]amino]carbonyl]-4-chlorophenyl]amino]methyl]-4-(glycylamino)-6-isopropoxyphenoxy]acetic acid hydrochloride 897632-46-1P, 3-[4-(2-Aminoacetyl)amino]-2-[[[2-[[[4-[(amino)(hydroxyimino)methyl]phenyl]amino]carbonyl]-4-methylphenyl]amino]methyl]-6-isopropoxyphenyl]propanoic acid trifluoroacetate 897632-47-2P, Ethyl 3-[4-(2-hydroxyacetyl)amino]-2-[[[2-[[[4-[(amino)(hydroxyimino)methyl]phenyl]amino]carbonyl]-4-methylphenyl]amino]methyl]-6-isopropoxyphenyl]propanoate 897632-48-3P, 3-[2-[[[2-[[[4-[(Amino)(hydroxyimino)methyl]phenyl]amino]carbonyl]-4-methylphenyl]amino]methyl]-4-(hydroxymethyl)-6-isopropoxyphenyl]propanoic acid sodium salt 897632-50-7P, [2-[[[2-[[[4-[(Amino)(imino)methyl]phenyl]amino]carbonyl]-4-chlorophenyl]amino]methyl]-6-ethoxyphenoxy]acetic acid trifluoroacetate 897632-52-9P,
 [2-[[[2-[[[4-[(Amino)(imino)methyl]phenyl]amino]carbonyl]-4-methylphenyl]amino]methyl]-6-hydroxyphenoxy]acetic acid formate 897632-54-1P, [2-[[[2-[[[4-[(Amino)(imino)methyl]phenyl]amino]carbonyl]-4-chlorophenyl]amino]methyl]-6-[2-(methylamino)-2-oxoethoxy]phenoxy]acetic acid formate 897632-55-2P,
 [2-[[[2-[[[4-[(Amino)(imino)methyl]phenyl]amino]carbonyl]-4-chlorophenyl]amino]methyl]-4-[(dimethylamino)methyl]-6-ethoxyphenoxy]acetic acid hydrochloride 897632-57-4P, [2-[[[2-[[[4-[(Amino)(imino)methyl]phenyl]amino]carbonyl]-4-methylphenyl]amino]methyl]-4-(hydroxymethyl)-6-propoxyphenoxy]acetic acid trifluoroacetate 897632-59-6P, [2-[[[2-[[[4-[(Amino)(imino)methyl]phenyl]amino]carbonyl]-4-

chlorophenyl]amino)methyl]phenyl](methyl)amino]acetic acid formate
 897632-61-0P, [2-[[[[4-[Amino(imino)methyl]phenyl]amino]carbonyl]-2-naphthyl]amino)methyl]-4-(hydroxymethyl)-6-isopropoxyphenoxy]acetic acid formate 897632-63-2P 897632-64-3P 897632-65-4P
 897632-66-5P 897632-67-6P 897632-68-7P 897632-69-8P 897632-70-1P
 897632-71-2P 897632-72-3P 897632-73-4P 897632-75-6P 897632-76-7P
 897632-77-8P 897632-79-0P 897632-80-3P 897632-81-4P 897632-82-5P
 897632-83-6P 897632-84-7P 897632-86-9P 897632-87-0P 897632-88-1P
 897632-90-5P 897632-91-6P 897632-92-7P 897632-93-8P 897632-94-9P
 897632-97-2P 897632-99-4P 897633-01-1P 897633-03-3P 897633-04-4P
 897633-05-5P 897633-06-6P 897633-07-7P 897633-08-8P 897633-09-9P
 897633-10-2P 897633-12-4P 897633-13-5P 897633-14-6P 897633-15-7P
 897633-16-8P 897633-17-9P 897633-18-0P 897633-19-1P 897633-20-4P
 897633-21-5P 897633-22-6P 897633-24-8P 897633-26-0P 897633-28-2P
 897633-30-6P 897633-32-8P 897633-34-0P 897633-36-2P 897633-38-4P
 897633-40-8P 897633-42-0P 897633-44-2P 897633-46-4P 897633-48-6P
 897633-50-0P 897633-52-2P 897633-54-4P 897633-56-6P 897633-58-8P
 897633-60-2P 897633-62-4P 897633-64-6P 897633-66-8P 897633-68-0P
 897633-70-4P 897633-72-6P 897633-74-8P 897633-76-0P 897633-78-2P
 897633-80-6P 897633-82-8P 897633-84-0P 897633-86-2P 897633-88-4P
 897633-90-8P 897633-92-0P 897633-94-2P 897633-96-4P 897633-97-5P
 897633-98-6P 897633-99-7P 897634-00-3P 897634-01-4P 897634-02-5P
 897634-03-6P 897634-04-7P 897634-06-9P 897634-08-1P 897634-10-5P
 897634-12-7P 897634-14-9P 897634-16-1P 897634-18-3P 897634-20-7P
 897634-22-9P 897634-24-1P 897634-26-3P 897634-27-4P 897634-29-6P
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 897634-41-2P 897634-43-4P 897634-45-6P 897634-47-8P 897634-49-0P
 897634-51-4P 897634-53-6P 897634-55-8P 897634-57-0P 897634-59-2P
 897634-61-6P 897634-63-8P 897634-65-0P 897634-67-2P 897634-69-4P
 897634-71-8P 897634-73-0P 897634-76-3P 897634-78-5P 897634-80-9P
 897634-82-1P 897634-84-3P 897634-85-4P 897634-87-6P 897634-89-8P
 897634-91-2P 897634-93-4P 897634-95-6P 897634-97-8P 897634-99-0P
 897635-01-7P 897635-03-9P 897635-04-0P 897635-05-1P 897635-07-3P
 897635-08-4P 897635-10-8P 897635-12-0P 897635-14-2P 897635-15-3P
 897635-17-5P 897635-19-7P 897635-21-1P 897635-23-3P 897635-25-5P
 897635-26-6P 897635-27-7P 897635-29-9P 897635-31-3P 897635-32-4P
 897635-33-5P 897635-35-7P 897635-37-9P 897635-39-1P 897635-41-5P
 897635-43-7P 897635-44-8P 897635-46-0P 897635-47-1P 897635-48-2P
 897635-49-3P 897635-50-6P 897635-51-7P 897635-52-8P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of carboxylic acid derivs. having three cyclic moieties as activated blood coagulation factor VII inhibitors and anticoagulants)

IT 897635-53-9P 897635-55-1P 897635-56-2P 897635-57-3P 897635-58-4P
 897635-59-5P 897635-61-9P 897635-62-0P 897635-64-2P 897635-66-4P
 897635-67-5P 897635-69-7P 897635-71-1P 897635-73-3P 897635-75-5P
 897635-76-6P 897635-78-8P 897635-79-9P 897635-81-3P 897635-83-5P
 897635-85-7P 897635-87-9P 897635-89-1P 897635-91-5P 897635-93-7P
 897635-95-9P 897635-97-1P 897635-99-3P 897636-01-0P 897636-03-2P
 897636-05-4P 897636-07-6P 897636-09-8P 897636-12-3P 897636-14-5P
 897636-16-7P 897636-18-9P 897636-20-3P 897636-22-5P 897636-24-7P
 897636-26-9P 897636-27-0P 897636-28-1P 897636-29-2P 897636-31-6P
 897636-33-8P 897636-35-0P 897636-37-2P 897636-39-4P 897636-41-8P
 897636-42-9P 897636-43-0P 897636-45-2P 897636-47-4P 897636-49-6P
 897636-51-0P 897636-53-2P 897636-55-4P 897636-56-5P,
 [2-[[[[2-[[[[4-[Amino(imino)methyl]phenyl]amino]carbonyl]-4-chlorophenyl]amino)methyl]-4-[(aminosulfonyl)amino]-6-isopropoxyphenoxy]acetic acid 897636-57-6P 897636-59-8P 897636-60-1P
 897636-61-2P 897636-63-4P 897636-65-6P 897636-67-8P 897636-69-0P
 897636-71-4P 897636-73-6P 897636-75-8P 897636-76-9P 897636-77-0P
 897636-78-1P 897636-79-2P 897636-80-5P 897636-81-6P 897636-83-8P

897636-85-0P	897636-86-1P	897636-88-3P	897636-89-4P	897636-90-7P
897636-92-9P	897636-94-1P	897636-96-3P	897636-97-4P	897636-99-6P
897637-02-4P	897637-05-7P	897637-06-8P	897637-08-0P	897637-10-4P
897637-12-6P	897637-13-7P	897637-15-9P	897637-17-1P	897637-19-3P
897637-21-7P	897637-23-9P	897637-25-1P	897637-27-3P	897637-29-5P
897637-31-9P	897637-33-1P	897637-35-3P	897637-37-5P	897637-39-7P
897637-41-1P	897637-43-3P	897637-45-5P	897637-47-7P	897637-49-9P
897637-51-3P	897637-53-5P	897637-55-7P	897637-57-9P	897637-59-1P
897637-60-4P	897637-61-5P	897637-63-7P	897637-65-9P	897637-66-0P
897637-67-1P	897637-69-3P	897637-71-5P	897637-72-8P	897637-74-0P
897637-76-2P	897637-78-4P	897637-80-6P	897637-82-0P	897637-84-2P
897637-86-4P	897637-88-6P	897637-90-0P	897637-92-2P	897637-94-4P
897637-96-6P	897637-97-7P	897637-99-9P	897638-01-6P	897638-04-9P
897638-06-1P	897638-08-3P	897638-10-7P	897638-12-9P	897638-14-1P
897638-16-3P	897638-17-4P	897638-18-5P	897638-20-9P	897638-21-0P
897638-23-2P	897638-25-4P	897638-26-5P	897638-28-7P	897638-30-1P
897638-31-2P	897638-33-4P	897638-35-6P	897638-37-8P	897638-39-0P
897638-41-4P	897638-43-6P	897638-45-8P	897638-47-0P	897638-49-2P
897638-51-6P	897638-53-8P	897638-55-0P	897638-57-2P	897638-59-4P
897638-61-8P	897638-62-9P	897638-63-0P	897638-64-1P	897638-66-3P
897638-68-5P	897638-70-9P	897638-71-0P	897638-72-1P	897638-73-2P
897638-75-4P	897638-77-6P	897638-79-8P	897638-81-2P	897638-83-4P
897638-85-6P	897638-87-8P	897638-89-0P	897638-91-4P	897638-93-6P
897638-95-8P	897638-97-0P	897638-99-2P	897639-01-9P	897639-03-1P
897639-05-3P	897639-07-5P	897639-09-7P	897639-11-1P	897639-13-3P
897639-14-4P	897639-16-6P	897639-18-8P	897639-20-2P	897639-23-5P
897639-25-7P	897639-27-9P	897639-29-1P	897639-31-5P	897639-32-6P
897639-34-8P	897639-36-0P	897639-38-2P	897639-40-6P	897639-41-7P
897639-43-9P	897639-44-0P	897639-45-1P	897639-46-2P	897639-47-3P
897639-48-4P	897639-50-8P	897639-52-0P	897639-54-2P	897639-56-4P
897639-57-5P	897639-58-6P	897639-59-7P	897639-61-1P	897639-62-2P
897639-63-3P	897639-65-5P			

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of carboxylic acid derivs. having three cyclic moieties as activated blood coagulation factor VII inhibitors and anticoagulants)

II	897639-66-6P	897639-67-7P	897639-68-8P	897639-69-9P	897639-71-3P
	897639-73-5P	897639-75-7P	897639-77-9P	897639-79-1P	897639-81-5P
	897639-82-6P	897639-83-7P	897639-84-8P	897639-85-9P	897639-86-0P
	897639-87-1P	897639-88-2P	897639-89-3P	897639-90-6P	897639-91-7P
	897639-92-8P	897639-93-9P	897639-94-0P	897639-95-1P	897639-96-2P
	897639-98-4P	897639-99-5P	897640-00-5P	897640-01-6P	897640-02-7P
	897640-03-8P	897640-04-9P	897640-05-0P	897640-06-1P	897640-07-2P
	897640-08-3P	897640-09-4P	897640-10-7P	897640-11-8P	897640-12-9P
	897640-13-0P	897640-14-1P	897640-15-2P	897640-16-3P	897640-17-4P
	897640-18-5P	897640-19-6P	897640-20-9P	897640-21-0P	897640-22-1P
	897640-23-2P	897640-25-4P	897640-26-5P	897640-27-6P	897640-28-7P
	897640-29-8P	897640-30-1P	897640-31-2P	897640-32-3P	897640-34-5P
	897640-35-6P	897640-36-7P	897640-38-9P	897640-39-0P	897640-41-4P
	897640-42-5P	897640-43-6P	897640-44-7P	897640-45-8P	897640-47-0P
	897640-48-1P	897640-49-2P	897640-50-5P	897640-51-6P	897640-52-7P
	897640-53-8P	897640-54-9P	897640-55-0P	897640-56-1P	897640-57-2P
	897640-58-3P	897640-59-4P	897640-60-7P	897640-61-8P	897640-62-9P
	897640-63-0P	897640-64-1P	897640-65-2P	897640-66-3P	897640-67-4P
	897640-68-5P	897640-69-6P	897640-70-9P	897640-71-0P	897640-73-2P
	897640-74-3P	897640-77-6P	897640-78-7P	897640-79-8P	897640-80-1P
	897640-81-2P	897640-82-3P	897640-83-4P	897640-84-5P	897640-85-6P
	897640-86-7P	897640-87-8P	897640-88-9P	897640-89-0P	897640-90-3P
	897640-91-4P	897640-92-5P	897640-93-6P	897640-94-7P	897640-95-8P
	897640-96-9P	897640-97-0P	897640-98-1P	897640-99-2P	897641-00-8P
	897641-01-9P	897641-02-0P	897641-03-1P	897641-04-2P	897641-05-3P

897641-07-5P 897641-08-6P 897641-09-7P 897641-10-0P 897641-11-1P
 897641-12-2P 897641-13-3P 897641-14-4P 897641-15-5P 897641-16-6P
 897641-17-7P 897641-18-8P 897641-19-9P 897641-21-3P 897641-22-4P
 897641-24-6P 897641-25-7P 897641-26-8P 897641-27-9P 897641-28-0P
 897641-29-1P 897641-30-4P 897641-31-5P 897641-32-6P 897641-33-7P
 897641-34-8P 897641-35-9P 897641-37-1P 897641-39-3P 897641-40-6P
 897641-41-7P 897641-42-8P 897641-43-9P 897641-44-0P 897641-45-1P
 897641-46-2P 897641-47-3P 897641-48-4P 897641-49-5P 897641-51-9P
 897641-54-2P 897641-57-5P 897641-65-5P 897641-68-8P 897641-71-3P
 897641-73-5P 897644-38-1P, Ethyl

2-[2-[[[2-[[[4-[(amino)(hydroxyimino)methyl]phenyl]amino]carbonyl]-4-(hydroxyphenyl)amino]methyl]-4-(hydroxymethyl)-6-isopropoxyphenoxy]acetate
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of carboxylic acid derivs. having three cyclic moieties as activated blood coagulation factor VII inhibitors and anticoagulants)

IT 50-00-0, Formaldehyde, reactions 57-57-8, β -Propiolactone
 75-03-6, Iodoethane 89-63-4, 4-Chloro-2-nitroaniline 90-02-8, Salicylaldehyde, reactions 98-80-6, Phenylboronic acid 100-97-0, Hexamethylenetetramine, reactions 107-21-1, Ethylene glycol, reactions 107-30-2, Chloromethyl methyl ether 108-01-0, 2-(Dimethylamino)methanol 108-16-7, 1-Dimethylamino-2-propanol 109-83-1, 2-(Methylamino)ethanol 124-40-3, Dimethylamine, reactions 345-16-4, 5-Fluorosalicylic acid 358-23-6, Trifluoromethanesulfonic acid anhydride 492-88-6, 3-Ethoxy-2-hydroxybenzaldehyde 541-41-3, Ethyl chloroformate 619-65-8, 4-Cyanobenzoic acid 635-21-2, 5-Chloroanthranilic acid 1125-88-8, Benzaldehyde dimethyl acetal 1484-84-0, 2-(Piperidin-2-yl)ethanol 1609-47-8, Diethyl dicarbonate 1663-39-4, 2498-50-2, 4-Aminobenzamidine dihydrochloride 2516-95-2, 5-Chloro-2-nitrobenzoic acid 3143-02-0, (3-Methyloxetan-3-yl)methanol 3433-37-2, Piperidin-2-ylmethanol 4421-08-3, 4-Cyano-2-methoxyphenol 4530-20-5, 2-(tert-Butoxycarbonylamino)acetic acid 4692-98-2, 5-Bromoisatoic anhydride 5274-70-4, 3-Nitrosalicylaldehyde 5292-43-3, 5330-38-1, 4-Chloro-2-(hydroxymethyl)phenol 5470-11-1 6092-54-2, n-Hexyl chloroformate 6628-86-0, 5-Chloro-2-nitrobenzaldehyde 6630-33-7, 2-Bromobenzaldehyde 7486-35-3, Tributylvinyltin 10463-20-4, (4-Hydroxy-3-nitrophenyl)acetic acid 18162-48-6, tert-Butyldimethylchlorosilane 24424-99-5, Di-tert-butyl dicarbonate 24677-78-9, 2,3-Dihydroxybenzaldehyde 26908-34-9, 2-(1,3-Dioxolan-2-yl)aniline 27532-96-3, Glycine tert-butyl ester hydrochloride 28539-02-8, 1H-Benzotriazole-1-methanol 30525-89-4, Paraformaldehyde 34770-60-0, 4-Methylpiperazin-2-one 37585-25-4, (2-Amino-5-chlorophenyl)methanol 51779-32-9, Di-tert-butyl iminodicarboxylate 53055-05-3, 3-Methoxy-2-nitrobenzaldehyde 57018-52-7, 1-tert-Butoxy-2-propanol 67868-82-0, 3-(Methylsulfanyl)salicylaldehyde 71118-98-4, 4-Hydroxy-3-isopropoxybenzaldehyde 74786-02-0, (1-tert-Butoxyvinyl)oxy(tert-butyl)dimethylsilane 86734-60-3, 2-Benzyloxy-3-hydroxybenzaldehyde 94838-55-8, tert-Butyl (4-aminobenzyl)carbamate 102191-92-4, 2-[(tert-Butyldimethylsilyl)oxy]acetaldehyde 136088-69-2 147000-89-3, N-(tert-Butoxycarbonyl)sulfamyl chloride 150655-06-4, 3-Ethoxy-2-hydroxy-5-nitrobenzaldehyde 155891-51-3, 2-(Bromomethyl)benzyl acetate 192130-58-8, Poly(ethyl glyoxylate) 222031-87-0, 2-Hydroxy-3-isopropoxybenzaldehyde 897640-67-4, 3-[2-[[[3-[[[4-[(Amino)(hydroxyimino)methyl]phenyl]amino]carbonyl]-5-methylpyridin-2-yl]amino]methyl]-4-(hydroxymethyl)-6-isopropoxyphenyl]propanoic acid hydrochloride 897643-91-3, tert-Butyl 2-(2-ethoxy-6-formyl-4-iodophenoxy)acetate 897643-94-6, tert-Butyl 3-(4-amino-2-hydroxymethyl-6-isopropoxyphenyl)propanoate 897644-14-3, Ethyl 2-[4-[[[4-[(tert-butoxycarbonyl)amino](imino)methyl]phenyl]carbamoyl

]-3-nitrophenyl]acetate 897644-16-5, Methanesulfonic acid
 2-tert-butoxy-1-methyl ethyl ester 897644-17-6, tert-Butyl
 3-[2-[[[2-[[[4-[(amino)(hydroxyimino)methyl]phenyl]amino]carbonyl]-4-
 chlorophenyl]amino]methyl]piperidin-1-yl]propanoate 897644-18-7,
 tert-Butyl 2-[2-[[[2-[[[4-[(tert-
 butoxycarbonyl]amino](imino)methyl]phenyl]amino]carbonyl]-4-
 chlorophenyl]amino]methyl]phenoxy]acetate 897644-19-8, tert-Butyl
 2-(2-acetylphenoxy)acetate 897644-23-4, tert-Butyl
 2-[2-[(benzyloxycarbonyl)methoxy]-6-[[[2-[[[4-[(tert-
 butoxycarbonyl]amino](imino)methyl]phenyl]amino]carbonyl]-4-
 chlorophenyl]amino]methyl]phenoxy]acetate 897644-24-5, Methyl
 3-[[[4-[(tert-butoxycarbonyl]amino](imino)methyl]phenyl]amino]carbonyl]-4-
 [[2-(2-tert-butoxy-2-oxoethoxy)-3-ethoxybenzyl]amino]benzoate
 897644-25-6, tert-Butyl 2-[4-((1R)-1,2-dihydroxyethyl)-2-ethoxy-6-
 formylphenoxy]acetate 897644-26-7, Ethyl
 3-(4-acetoxymethyl-2-formyl-6-isopropoxyphenyl)propanoate 897644-27-8,
 2-Amino-N-[2-[amino(imino)methyl]pyrimidin-5-yl]-5-methylbenzamide
 hydrochloride 897644-31-4, Ethyl
 2-[2-formyl-4-(hydroxymethyl)phenoxy]acetate 897644-32-5, tert-Butyl
 2-[(2-formyl-6-methoxyphenyl)(trifluoroacetyl)amino]acetate 897644-33-6,
 2-Amino-N-[4-[amino(imino)methyl]phenyl]-5-methylbenzamide 897644-34-7,
 Ethyl 3-[2-formyl-4-(hydroxymethyl)-6-isopropoxyphenyl]propanoate
 897644-41-6, Methyl 4-(2-tert-butoxy-2-oxoethoxy)-3-ethoxy-5-
 formylbenzoate 897644-43-8, Ethyl
 2-[4-acetoxymethyl-2-[[[2-[[[4-
 [(amino)(hydroxyimino)methyl]phenyl]amino]carbonyl]-4-
 methylphenyl]amino]methyl]-6-isopropoxyphenoxy]acetate 897644-44-9,
 tert-Butyl 3-[2-[[[2-[[[4-
 [(ethoxycarbonyl)amino](imino)methyl]phenyl]amino]carbonyl]-4-
 methylphenyl]amino]methyl]-4-(hydroxymethyl)-6-isopropoxyphenyl]propanoate
 897644-45-0, tert-Butyl 2-[4-amino-2-[[[4-chloro-2-[[[4-
 [(amino)(hydroxyimino)methyl]phenyl]phenyl]amino]methyl]-6-
 isopropoxyphenoxy]acetate 897644-47-2, Ethyl
 3-[4-[[N-(tert-butoxycarbonyl)glycyl]amino]-2-formyl-6-
 isopropoxyphenyl]propanoate 897644-48-3, Ethyl
 3-[4-[[[2-(tert-butoxycarbonylamino)ethanoyl]amino]-2-[[[2-[[[4-
 [(amino)(hydroxyimino)methyl]phenyl]amino]carbonyl]-4-
 methylphenyl]amino]methyl]-6-isopropoxyphenyl]propanoate 897644-49-4,
 Ethyl 3-[4-[(acetoxycetyl)amino]-2-formyl-6-isopropoxyphenyl]propanoate
 897644-53-0, Ethyl 2-(4-acetoxymethyl-2-formyl-6-propoxyphenoxy)acetate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of carboxylic acid derivs. having three cyclic moieties as
 activated blood coagulation factor VII inhibitors and anticoagulants)

IT	68007-03-4P	75372-00-8P	95202-37-2P	95202-38-3P	897642-53-4P
	897642-54-5P	897642-55-6P	897642-56-7P	897642-57-8P	897642-58-9P
	897642-59-0P	897642-60-3P	897642-61-4P	897642-62-5P	897642-63-6P
	897642-64-7P	897642-65-8P	897642-66-9P	897642-67-0P	897642-68-1P
	897642-69-2P	897642-70-5P	897642-71-6P	897642-72-7P	897642-73-8P
	897642-74-9P	897642-75-0P	897642-76-1P	897642-77-2P	897642-78-3P
	897642-79-4P	897642-80-7P	897642-81-8P	897642-82-9P	897642-83-0P
	897642-84-1P	897642-85-2P	897642-86-3P	897642-87-4P	897642-88-5P
	897642-89-6P	897642-90-9P	897642-91-0P	897642-92-1P	897642-93-2P
	897642-94-3P	897642-95-4P	897642-96-5P	897642-97-6P	897642-98-7P
	897642-99-8P	897643-00-4P	897643-01-5P	897643-02-6P	897643-03-7P
	897643-04-8P	897643-05-9P	897643-06-0P	897643-08-2P	897643-10-6P
	897643-11-7P	897643-12-8P	897643-13-9P	897643-14-0P	897643-15-1P
	897643-16-2P	897643-17-3P	897643-18-4P	897643-19-5P	897643-20-8P
	897643-21-9P	897643-22-0P	897643-23-1P	897643-24-2P	897643-25-3P
	897643-26-4P	897643-27-5P	897643-28-6P	897643-29-7P	897643-30-0P
	897643-31-1P	897643-32-2P	897643-33-3P	897643-34-4P	897643-35-5P
	897643-36-6P	897643-37-7P	897643-38-8P	897643-39-9P	897643-40-2P
	897643-41-3P	897643-42-4P	897643-43-5P	897643-44-6P	897643-45-7P

897643-46-8P 897643-47-9P 897643-48-0P 897643-49-1P 897643-50-4P
 897643-51-5P 897643-52-6P 897643-53-7P 897643-54-8P 897643-55-9P
 897643-56-0P 897643-57-1P 897643-58-2P 897643-59-3P 897643-60-6P
 897643-61-7P 897643-62-8P 897643-63-9P 897643-64-0P 897643-65-1P
 897643-66-2P 897643-67-3P 897643-68-4P 897643-69-5P 897643-70-8P
 897643-71-9P 897643-72-0P 897643-73-1P 897643-74-2P 897643-75-3P
 897643-76-4P 897643-77-5P 897643-78-6P 897643-79-7P 897643-80-0P
 897643-81-1P 897643-82-2P 897643-83-3P 897643-84-4P 897643-85-5P
 897643-86-6P 897643-87-7P 897643-88-8P 897643-89-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of carboxylic acid derivs. having three cyclic moieties as activated blood coagulation factor VII inhibitors and anticoagulants)

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
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- (31) Schering Ag; JP 2005538112 A 2004
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L9 ANSWER 13 OF 55 CAPLUS COPYRIGHT 2009 ACS ON STN

AN 2006:536488 CAPLUS

DN 145:254490

ED Entered STN: 08 Jun 2006

TI A vapour hazard index for use with COSHH and DSEAR

AU Pitt, Martin J.

CS Chemical and Process Engineering, University of Sheffield, UK

SO Institution of Chemical Engineers Symposium Series (2006), 151(Hazards XIX: Process Safety and Environmental Protection--What do we Know? Where are we Going?), 95-107

CODEN: ICESDB; ISSN: 0307-0492

PB Institution of Chemical Engineers

DT Journal

LA English

CC 59-5 (Air Pollution and Industrial Hygiene)
 Section cross-reference(s): 4, 45

AB For workers who may be exposed to chemical vapors, the Control of Substances Hazardous to Health Regulations 2002 (amended 2004) and Dangerous Substances and Explosive Atmospheres Regulations 2002 require risk assessment and control of the hazard. For example, if a solvent cleaning process is planned, the employer should review possible options and determine if workers may be exposed to an unsafe levels of harmful vapor. If so, steps must be taken to modify the work or protect the worker by ventilation, respiratory protection, etc. From Apr. 2005, Workplace Exposure Limits (WEL) replaced the former Occupational Exposure Stds. (OES) and Occupational Exposure Limits (OEL); however, these do not directly measure hazards because in practice, they are also determined by the amount of vapor emitted by a liquid, which depends on its vapor pressure. Thus, a Vapor Hazard Index is proposed and listed for volatile substances and gases with a WEL. This is the saturated vapor pressure:WEL ratio, i.e, the amount by which the vapor will exceed the WEL in a confined space. It combines the toxicol. standard and phys. properties and can be used for an initial risk assessment, e.g., to compare the danger of alternative solvents. It may also be used to specify control measures and is comparable with practice in other countries. For many users, it is suggested this may be more directly useful than the WEL, so it is proposed that the Vapor Hazard Index should be published along with WEL in the future.

ST occupational health hazard vapor hazard index volatile substance gas;
 volatile substance gas vapor hazard index occupational safety

IT Health hazard
 (gaseous; vapor hazard index to assess and control volatile substance and gas vapor hazards to ensure compliance with safety, health, and dangerous substances and explosive atmospheres regulations in UK)

IT Gases
 (hazardous; vapor hazard index to assess and control volatile substance and gas vapor hazards to ensure compliance with safety, health, and dangerous substances and explosive atmospheres regulations in UK)

IT Standards, legal and permissive
 (occupational safety; vapor hazard index to assess and control volatile substance and gas vapor hazards to ensure compliance with safety, health, and dangerous substances and explosive atmospheres regulations in UK)

IT Explosibility
 Human
 Industrial hygiene
 Occupational health hazard
 Occupational safety
 Risk assessment
 Volatile substances
 (vapor hazard index to assess and control volatile substance and gas vapor hazards to ensure compliance with safety, health, and dangerous substances and explosive atmospheres regulations in UK)

IT Turpentine
 RL: ADV (Adverse effect, including toxicity); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
 (vapor hazard index to assess and control volatile substance and gas vapor hazards to ensure compliance with safety, health, and dangerous substances and explosive atmospheres regulations in UK)

IT Air pollution
 Indoor air pollution
 (workplace air; vapor hazard index to assess and control volatile substance and gas vapor hazards to ensure compliance with safety, health, and dangerous substances and explosive atmospheres regulations in UK)

IT 50-00-0, Formaldehyde, biological studies 56-23-5, Carbon tetrachloride, biological studies 60-29-7, Diethyl ether, biological studies 62-53-3, Aniline, biological studies 64-17-5, Ethanol, biological studies 64-18-6, Formic acid, biological studies 64-67-5, Diethylsulfate 67-56-1, Methanol, biological studies 67-63-0, 2-Propanol, biological studies 67-64-1, Acetone, biological studies 67-66-3, Chloroform, biological studies 68-12-2, Dimethylformamide, biological studies 71-23-8, 1-Propanol, biological studies 71-43-2, Benzene, biological studies 71-55-6, 1,1,1-Trichloroethane 74-83-9, Bromomethane, biological studies 74-87-3, Chloromethane, biological studies 74-90-8, Hydrogen cyanide, biological studies 74-93-1, Methanethiol, biological studies 75-00-3, Chloroethane 75-01-4, Vinyl chloride, biological studies 75-04-7, Ethylamine, biological studies 75-05-8, Acetonitrile, biological studies 75-07-0, Acetaldehyde, biological studies 75-08-1, Ethanethiol 75-09-2, Dichloromethane, biological studies 75-15-0, Carbon disulfide, biological studies 75-21-8, Ethylene oxide, biological studies 75-34-3, 1,1-Dichloroethane 75-35-4, Vinylidene chloride, biological studies 75-43-4, Dichlorofluoromethane 75-44-5, Phosgene 75-45-6, Chlorodifluoromethane 75-52-5, Nitromethane, biological studies 75-56-9, Propylene oxide, biological studies 75-65-0, 2-Methylpropan-2-ol, biological studies 76-06-2, Trichloronitromethane 77-78-1, Dimethylsulfate 78-83-1, 2-Methylpropan-1-ol, biological studies 78-92-2, 2-Butanol 78-93-3, 2-Butanone, biological studies 79-01-6, Trichloroethylene, biological studies 79-09-4, Propionic acid, biological studies 79-20-9, Methylacetate 79-27-6, 1,1,2,2-Tetrabromoethane 79-46-9, 2-Nitropropane 80-62-6, Methyl methacrylate 95-47-6, o-Xylene, biological studies 95-50-1, 1,2-Dichlorobenzene 95-53-4, o-Toluidine, biological studies 96-22-0, 3-Pentanone 98-01-1, 2-Furaldehyde, biological studies 98-82-8, Cumene 98-95-3, Nitrobenzene, biological studies 100-41-4, Ethylbenzene, biological studies 100-42-5, Styrene, biological studies 100-44-7, Benzyl chloride, biological studies 100-61-8, N-Methylaniline, biological studies 100-74-3, 4-Ethylmorpholine 101-84-8, Diphenyl ether 106-35-4, 3-Heptanone 106-42-3, p-Xylene, biological studies 106-46-7, 1,4-Dichlorobenzene 106-93-4, Ethylene dibromide 107-02-8, Acrolein, biological studies 107-06-2, Ethylene dichloride, biological studies 107-13-1, Acrylonitrile, biological studies 107-18-6, Allyl alcohol, biological studies 107-19-7, 2-Propyn-1-ol 107-87-9, 2-Pentanone 107-88-2, 1-Methoxypropan-2-ol 108-01-0, 2-Dimethylaminoethanol 108-10-1, 4-Methylpentan-2-one 108-18-9, Diisopropylamine 108-20-3, Diisopropyl ether 108-23-6, Isopropyl chloroformate 108-24-7, Acetic anhydride 108-38-3, m-Xylene, biological studies 108-83-8, 2,6-Dimethylheptan-4-one 108-88-3, Toluene, biological studies 108-90-7, Chlorobenzene, biological studies 108-91-8, Cyclohexylamine, biological studies 108-93-0, Cyclohexanol, biological studies 108-94-1, Cyclohexanone, biological studies 109-60-4, n-Propyl acetate 109-86-4, 2-Methoxyethanol 109-87-5, Dimethoxymethane 109-89-7, Diethylamine, biological studies 109-94-4, Ethylformate 109-99-9, Tetrahydrofuran, biological studies 110-12-3, 5-Methylhexan-2-one 110-19-0, Isobutyl acetate 110-43-0, 2-Heptanone 110-49-6, 2-Methoxyethyl acetate 110-54-3, n-Hexane, biological studies 110-80-5, 2-Ethoxyethanol 110-82-7, Cyclohexane, biological studies 110-86-1, Pyridine, biological studies 110-89-4, Piperidine, biological studies 111-15-9, 2-Ethoxyethyl acetate 111-30-8, Glutaraldehyde 111-76-2, 2-Butoxyethanol 112-07-2, 2-Butoxyethyl acetate 115-10-6, Dimethyl ether 120-82-1, 1,2,4-Trichlorobenzene 121-44-8, Triethylamine, biological studies 123-51-3, 3-Methylbutan-1-ol 123-86-4, n-Butyl acetate 123-91-1, 1,4-Dioxane, biological studies 124-38-9, Carbon dioxide, biological studies 124-40-3, Dimethylamine, biological studies 127-18-4, Tetrachloroethylene, biological studies 127-19-5, N,N-Dimethylacetamide 138-22-7, Butyl lactate 140-88-5,

Ethyl acrylate 141-43-5, 2-Aminoethanol, biological studies 141-78-6, Ethyl acetate, biological studies 142-82-5, n-Heptane, biological studies 151-67-7, Halothane 156-59-2, cis-1,2-Dichloroethylene 156-60-5, trans-1,2-Dichloroethylene 302-01-2, Hydrazine, biological studies 463-51-4, Ketene 541-41-3, Ethyl chloroformate 541-85-5, 5-Methylheptan-3-one 542-88-1, Bis(chloromethyl ether) 583-60-8, 2-Methylcyclohexanone 591-78-6, 2-Hexanone 628-63-7, Pentyl acetate 630-08-0, Carbon monoxide, biological studies 811-97-2, 1,1,1,2-Tetrafluoroethane 872-50-4, 1-Methyl-2-pyrrolidone, biological studies 1634-04-4, Methyl-tert-butyl ether 2551-62-4, Sulfur hexafluoride 2699-79-8, Sulfuryl difluoride 7647-01-0, Hydrogen chloride, biological studies 7664-39-3, Hydrogen fluoride, biological studies 7664-41-7, Ammonia, biological studies 7726-95-6, Bromine, biological studies 7782-41-4, Fluorine, biological studies 7782-50-5, Chlorine, biological studies 7782-65-2, Germane 7783-06-4, Hydrogen sulfide, biological studies 7784-42-1, Arsine 7803-51-2, Phosphine 7803-62-5, Silane, biological studies 10024-97-2, Nitrous oxide, biological studies 10025-87-3, Phosphoryl trichloride 10035-10-6, Hydrogen bromide, biological studies 10049-04-4, Chlorine dioxide 25154-54-5, Dinitrobenzene 2551-13-7, Trimethylbenzene 25639-42-3, Methylcyclohexanol 26952-21-6, Isooctyl alcohol 86475-92-5, 1-Methoxypropylacetate

RL: ADV (Adverse effect, including toxicity); PRP (Properties); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)

(vapor hazard index to assess and control volatile substance and gas vapor hazards to ensure compliance with safety, health, and dangerous substances and explosive atmospheres regulations in UK)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L9 ANSWER 14 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:137980 CAPLUS

DN 144:192505

ED Entered STN: 15 Feb 2006

TI Method for preparation of Zofenopril for treating hypertension
 IN Zhang, Fuli; An, Dong; Pan, Linyu; Xie, Meihua
 PA Shanghai Institute of Pharmaceutical Industry, Peop. Rep. China; Jiangsu
 Kanion Pharmaceutical Co., Ltd.
 SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 15 pp.
 CODEN: CNXXEV
 DT Patent
 LA Chinese
 IC ICM C07D207-16
 ICS A61P009-12
 CC 34-2 (Amino Acids, Peptides, and Proteins)
 Section cross-reference(s): 1

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1594291	A	20050316	CN 2003-150893	20030910
	CN 1245383	C	20060315		
PRAI	CN 2003-150893		20030910		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
CN 1594291	ICM	C07D207-16
	ICS	A61P009-12
	IPCI	C07D207-00 [I,C]; C07D0207-16 [I,A]
	IPCR	A61P0009-00 [I,C*]; A61P0009-12 [I,A]; C07D0207-00 [I,C*]; C07D0207-16 [I,A]

OS CASREACT 144:192505

AB The method comprises acylating (R,S)-3-benzoylthio-2-Me propanoic acid with acylation agent such as SOCl₂, POCl₃, POCl₃ at -20-120°C to give (R,S)-3-benzoylthio-2-Me propionyl chloride, then condensing with (4S)-phenylthio-L-proline in the presence of base such as pyridine, KOH, etc. at pH = 5.0-12.0 and -20-120° to give (4S)-[(2R)-benzoylthio-2-Me propionyl]-4-(phenylthio)-L-proline and (4S)-[(2S)-benzoylthio-2-Me propionyl]-4-(phenylthio)-L-proline; then saltifying with amine such as aniline, cyclohexylamine, pyridine, etc. at mole ratio of 1:1.05-1.1; dissolving in acid solution, extracting with organic solvent (benzene, hexane, ether, Et acetate, etc.), and evaporating solvent to give (4S)-[(2R)-benzoylthio-2-Me propionyl]-4-(phenylthio)-L-proline. The Zofenopril can be used for treating hypertension.

ST Zofenopril synthesis acylation antihypertensive

IT Acylation

Antihypertensives

(preparation of Zofenopril as antihypertensive)

IT 7719-09-7, Thionyl chloride 7719-12-2, Trichlorophosphine 7791-25-5,
 Sulfonyl dichloride 10025-87-3, Phosphorus chloride oxide (PCl₃)
 10026-13-8, Phosphorus pentachloride

RL: RCT (Reactant); RACT (Reactant or reagent)
 (as acylation agent)

IT 110-86-1, Pyridine, uses 121-44-8, Triethylamine, uses 144-55-8,
 Sodium bicarbonate, uses 497-19-8, Sodium carbonate, uses 584-08-7,
 Potassium carbonate 1305-62-0, Calcium hydroxide, uses 1310-58-3,
 Potassium hydroxide, uses 1310-73-2, Sodium hydroxide, uses 7558-79-4,
 Sodium phosphate (Na₂HPO₄) 7601-54-9, Sodium phosphate (Na₃PO₄)
 7758-11-4, Potassium phosphate (K₂HPO₄) 7778-53-2, Potassium phosphate
 (K₃PO₄) 337527-31-8

RL: NUU (Other use, unclassified); USES (Uses)
 (as base for condensation reaction)

IT 298-14-6, Potassium bicarbonate

RL: NUU (Other use, unclassified); USES (Uses)
 (as base for condensation reaction K₂HPO₄)

IT 56-87-1, Lysine, uses 62-53-3, Aniline, uses 74-79-3, Arginine, uses
 95-53-4, 2-Methylaniline, uses 101-83-7, Dicyclohexylamine 102-71-6,

uses 106-49-0, 4-Methylaniline, uses 107-15-3, 1,2-Diaminoethane, uses 108-01-0, N,N-Dimethylaminoethanol 108-91-8, Cyclohexylamine, uses 109-89-7, Diethylamine, uses 111-42-2, N,N-Diethanolamine, uses 122-39-4, Diphenylamine, uses 1003-03-8, Cyclopentylamine 5452-35-7, Cycloheptylamine
 RL: NUU (Other use, unclassified); USES (Uses)
 (as organic base)

IT 81872-10-8P, Zofenopril
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation of Zofenopril as antihypertensive)

IT 74431-50-8 81653-77-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of Zofenopril as antihypertensive)

IT 81938-38-7P 875303-98-3P 875303-99-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of Zofenopril as antihypertensive)

IT 56-23-5, Carbon tetrachloride, uses 67-64-1, Acetone, uses 67-66-3, Chloroform, uses 67-68-5, DMSO, uses 68-12-2, DMF, uses 71-43-2, Benzene, uses 75-09-2, Methylene chloride, uses 78-93-3, Butanone, uses 108-88-3, Toluene, uses 109-99-9, THF, uses 123-91-1, Dioxane, uses 127-19-5, N,N-Dimethylacetamide 617-84-5, N,N-Diethylformamide 1300-21-6, Dichloroethane
 RL: NUU (Other use, unclassified); USES (Uses)
 (solvent for acylation)

IT 60-29-7, Diethyl ether, uses 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 67-63-0, Isopropanol, uses 71-23-8, 1-Propanol, uses 71-36-3, 1-Butanol, uses 75-05-8, Acetonitrile, uses 78-83-1, Isobutanol, uses 79-20-9, Methyl acetate 107-21-1, 1,2-Ethanediol, uses 108-20-3, Diisopropyl ether 108-93-0, Cyclohexanol, uses 109-21-7, Butyl butanoate 123-51-3, Isopentanol 123-86-4, Butyl acetate 141-78-6, Ethyl acetate, uses 592-84-7, Butyl formate 1330-20-7, Xylene, uses 26264-14-2, Propanediol 525579-86-6, Hexanol
 RL: NUU (Other use, unclassified); USES (Uses)
 (solvent for saltification)

L9 ANSWER 15 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2005:1280822 CAPLUS
 DN 144:162932
 ED Entered STN: 07 Dec 2005

TI Unexpected structural analogy between early and late 3d transition metal alkoxide carboxylates: Synthesis and single crystal X-ray study of Ni6(OH)2(ORN)6(OCOR)2, RN = C2H4NMe2, R = H, CH3
 AU Ilina, Elena; Kessler, Vadim G.
 CS Department of Chemistry, Altay State University, Barnaul, Russia
 SO Polyhedron (2005), 24(18), 3052-3056
 CODEN: PLYHDE; ISSN: 0277-5387
 PB Elsevier B.V.
 DT Journal
 LA English
 CC 78-7 (Inorganic Chemicals and Reactions)
 Section cross-reference(s): 75
 OS CASREACT 144:162932

AB Modification of the liquid Ni(ORN)2, RN = C2H4NMe2, with stoichiometric or sub-stoichiometric amts. of carboxylic acids, HCOOH or CH3COOH, gave crystalline heteroleptic complexes Ni6(OH)2(ORN)6(OCOR)2, R = H (1), CH3 (3) with the core structure closely analogous to that observed earlier for hexanuclear Ti(IV) alkoxide carboxylates and derived from hexagonal packing of the donor atoms. The formate ligand in 1 could apparently be derived from oxidation of the amino alc. reactant by traces of

ST oxygen, and the hydroxide ligands from water formed in the reaction.
crystal structure nickel alkoxide carboxylate hydroxide hexanuclear
cluster; nickel alkoxide carboxylate hydroxide hexanuclear cluster prep
structure
IT Crystal structure
Molecular structure
(of hexanuclear nickel aminoethoxide carboxylate hydroxide clusters)
IT Cluster compounds
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure of hexanuclear nickel aminoethoxide
carboxylate hydroxide clusters)
IT 64-18-6, Formic acid, reactions 64-19-7, Acetic acid,
reactions 108-01-0, 2-(Dimethylamino)ethanol
10534-88-0, Hexaamminenickel(2+) dichloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(for preparation of hexanuclear nickel aminoethoxide carboxylate hydroxide
cluster)
IT 873778-74-6P 873778-78-0P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure of)
IT 873778-76-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L9 ANSWER 16 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2005:1168599 CAPLUS

DN 144:88435

ED Entered STN: 03 Nov 2005

TI Regioselective C-2 and C-6 Substitution of (S)-Nicotine and Nicotine
Derivatives

AU Fevrier, Florence C.; Smith, Emilie D.; Comins, Daniel L.

CS Department of Chemistry, North Carolina State University, Raleigh, NC,
27695-8204, USA

SO Organic Letters (2005), 7(24), 5457-5460

CODEN: ORLEF7; ISSN: 1523-7060

PB American Chemical Society

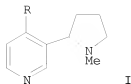
DT Journal

LA English

CC 31-5 (Alkaloids)

OS CASREACT 144:88435

GI



- AB Regioselective deprotonations of (S)-nicotine and derivs. I [R = H, SiMe₃, SiMe₂(CH₂CH:CH₂), SiMe₂Ph] at the C-2 and C-6 positions of the pyridine ring were performed in good to excellent yields. These methodologies allow the direct introduction of a plethora of functional groups, e.g. iodo, chloro, and tributylstannyl, onto the pyridine ring of nicotine.
- ST nicotine regioselective electrophilic substitution
- IT Deprotonation
- Substitution reaction, electrophilic
(regioselective; regioselective electrophilic substitution of
(S)-nicotine and derivs.)
- IT 54-11-5, (S)-Nicotine 108-01-0, 2-(Dimethylamino)
ethanol 109-94-4, Ethyl formate 852238-98-3
852619-88-6 872315-64-5
- RL: RCT (Reactant); RACT (Reactant or reagent)
(regioselective electrophilic substitution of (S)-nicotine and derivs.)
- IT 67-72-1, Hexachloroethane 75-77-4, Trimethylsilyl chloride, reactions
128-08-5, N-Bromosuccinimide 594-82-1, Hexamethylethane 624-92-0,
Dimethyldisulfide 768-33-2, Dimethylphenylsilyl chloride 1461-22-9,
Chlorotributylstannane 3091-32-5, Chlorotricyclohexylstannane
7726-95-6, Bromine, reactions 16636-96-7, Di-tert-butyl zinc
29594-22-7
- RL: RGT (Reagent); RACT (Reactant or reagent)
(regioselective electrophilic substitution of (S)-nicotine and derivs.)
- IT 40316-89-0P 80294-10-6P 96400-85-0P 112091-17-5P 853737-18-5P
853737-19-6P 853737-20-9P 853737-21-0P 853737-22-1P 872315-65-6P
872315-66-7P 872315-67-8P 872315-68-9P 872315-69-0P 872315-70-3P
872315-71-4P 872315-72-5P 872315-73-6P
- RL: SPN (Synthetic preparation); PREP (Preparation)
(regioselective electrophilic substitution of (S)-nicotine and derivs.)
- RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
- RE
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L9 ANSWER 17 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2005:698085 CAPLUS

DN 143:154240

ED Entered STN: 05 Aug 2005

TI Alkanolamines used as thermal stabilizers in production of homopolymers or copolymers of vinyl chloride with good thermal stability

IN Macho, Vendelin; Srokova, Iva; Beno, Lubos; Lucky, Martin; Gaman, Lubos; Mazanec, Jan; Cingelova, Jarmila; Hojc, Jan

PA Slovakia

SO Slovakia, 7 pp.

CODEN: SLXXFO

DT Patent

LA Slovak

IC ICM C08F002-18

ICS C08F002-22; C08F014-06

CC 37-3 (Plastics Manufacture and Processing)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SK 284170	B6	20041005	SK 2001-73	20010115
PRAI SK 2001-73		20010115		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
SK 284170	ICM	C08F002-18
	ICS	C08F002-22; C08F014-06
	IPCI	C08F002-18 [ICM,7]; C08F0002-22 [ICS,7]; C08F0002-12 [ICS,7,C*]; C08F0014-06 [ICS,7]; C08F0014-00 [ICS,7,C*]

OS MARPAT 143:154240

AB Vinyl chloride (co)polymers with good thermal stability are obtained by (co)polymerizing vinyl chloride, followed by addition of 0.01-1.2% (based on

the polymer weight) of a water-soluble alkanolamine with the general formula $RN(R')(R'')$, where R and R' are H, Me, Et, Pr, Bu, $CnH2nOH$ and $CnH2nOCnH2nOH$, and R'' is $CnH2nOH$ and $CnH2nOCnH2nOH$, and n is 2-4, or a mixture of a water-soluble alkanolamine with a water-soluble salt of an alkali metal. Thus, a vinyl acetate-vinyl chloride copolymer was after preparation mixed with triethanolamine thermal stabilizer.

ST PVC thermal stabilization alkanolamine; vinyl chloride copolymer alkanolamine alkali metal salt thermal stabilizer

IT Heat stabilizers

(alkanolamines and optionally also alkali metal salts used as thermal stabilizers in production of thermally stable vinyl chloride (homo)polymers)

IT 9002-86-2P, PVC 9003-22-9P, Vinyl acetate-vinyl chloride copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)

(alkanolamines and optionally also alkali metal salts used as thermal stabilizers in production of thermally stable vinyl chloride

(homo)polymers)

IT 102-71-6, Triethanolamine, uses 105-59-9, Methyl-diethanolamine
 108-01-0, Dimethylaminoethanol 111-42-2, Diethanolamine, uses
 122-20-3, Triisopropanolamine 127-08-2, Potassium acetate 141-43-5,
 Monoethanolamine, uses 142-72-3, Magnesium acetate 497-19-8, Sodium
 carbonate, uses 557-39-1, Magnesium formate 7558-79-4,
 Disodium hydrogen phosphate 7631-99-4, Sodium nitrate, uses 7681-57-4,
 Sodium pyrosulfite 7757-79-1, Potassium nitrate, uses 70789-50-3
 254448-29-8 860342-27-4 860342-28-5
 RL: MOA (Modifier or additive use); USES (Uses)
 (alkanolamines and optionally also alkali metal salts used as thermal
 stabilizers in production of thermally stable vinyl chloride
 (homo)polymers)

L9 ANSWER 18 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2005:71176 CAPLUS

DN 142:176857

ED Entered STN: 27 Jan 2005

TI Preparation of fused aryl and heteroaryl derivatives, in particular
 pyrazolo[3,4-d]pyrimidines, as modulators of G-coupled protein receptor
 and their use in the prophylaxis and treatment of metabolic disorders

IN Jones, Robert M.; Semple, Graeme; Xiong, Yifeng; Shin, Young-Jun; Ren,
 Albert S.; Calderon, Imelda; Fioravanti, Beatriz; Choi, Jin Sun Karoline;
 Sage, Carlton R.

PA Arena Pharmaceuticals, Inc., USA

SO PCT Int. Appl., 320 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07D487-04

ICS C07D473-00; C07D498-04; C07D471-04; C07D215-22; A61K031-519;
 A61K031-52; A61K031-4375; A61K031-47; A61P003-00; A61P003-10

CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 1, 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005007658	A2	20050127	WO 2004-US22417	20040713
	WO 2005007658	A3	20050616		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MM, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004257267	A1	20050127	AU 2004-257267	20040713
	CA 2532971	A1	20050127	CA 2004-2532971	20040713
	US 20050059650	A1	20050317	US 2004-890549	20040713
	US 7132426	B2	20061107		
	EP 1644375	A2	20060412	EP 2004-756935	20040713
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
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	SG 149492	A1	20080828	SG 2008-5436	20040713
	IN 2006KN00071	A	20070727	IN 2006-KN71	20060109

	KR 2006056944	A	20060525	KR 2006-700945	20060113
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	NO 2006000688	A	20060407	NO 2006-688	20060213
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	US 20070072844	A1	20070329	US 2006-602162	20061120
	US 20070082874	A1	20070412	US 2006-602176	20061120
PRAI	US 2003-487443P	P	20030714		
	US 2003-510644P	P	20031010		
	US 2004-890549	A3	20040713		
	WO 2004-US22417	W	20040713		
	US 2006-355785	A1	20060216		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2005007658	ICM	C07D487-04
	ICS	C07D473-00; C07D498-04; C07D471-04; C07D215-22; A61K031-519; A61K031-52; A61K031-4375; A61K031-47; A61P003-00; A61P003-10
	IPCI	C07D0487-04 [ICM,7]; C07D0487-00 [ICM,7,C*]; C07D0473-00 [ICS,7]; C07D0498-04 [ICS,7]; C07D0498-00 [ICS,7,C*]; C07D0471-04 [ICS,7]; C07D0471-00 [ICS,7,C*]; C07D0215-22 [ICS,7]; C07D0215-00 [ICS,7,C*]; A61K0031-519 [ICS,7]; A61K0031-52 [ICS,7]; A61K0031-4375 [ICS,7]; A61K0031-4353 [ICS,7,C*]; A61K0031-47 [ICS,7]; A61P0003-00 [ICS,7]; A61P0003-10 [ICS,7]
	IPCR	A61P0003-00 [I,C*]; A61P0003-00 [I,A]; A61P0003-10 [I,A]; C07D0215-00 [I,C*]; C07D0215-22 [N,A]; C07D0215-233 [I,A]; C07D0471-00 [I,C*]; C07D0471-04 [I,A]; C07D0473-00 [I,C*]; C07D0473-00 [I,A]; C07D0487-00 [I,C*]; C07D0487-04 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]
	ECLA	C07D215/22C; C07D471/04+239B+221B; C07D471/04+221B+221B+2; C07D473/00B2A; C07D487/04+249B+239B; C07D487/04+239C+231C; C07D487/04+239B+231B; C07D498/04+261B+239B; M07D
AU 2004257267	IPCI	C07D0487-00 [I,C]; A61K0031-4353 [I,C]; A61K0031-47 [I,C]; A61K0031-519 [I,C]; A61P0003-00 [I,C]; C07D0215-00 [I,C]; C07D0471-00 [I,C]; C07D0473-00 [I,C]; C07D0498-00 [I,C]; C07D0487-04 [I,A]; A61K0031-4375 [I,A]; A61K0031-47 [I,A]; A61K0031-519 [I,A]; A61K0031-52 [I,A]; A61P0003-00 [I,A]; A61P0003-10 [I,A]; C07D0215-22 [I,A]; C07D0471-04 [I,A]; C07D0473-00 [I,A]; C07D0498-04 [I,A]
	IPCR	C07D0487-00 [I,C]; C07D0487-04 [I,A]; A61K0031-4353 [I,C]; A61K0031-4375 [I,A]; A61K0031-47 [I,C]; A61K0031-519 [I,C]; A61K0031-519 [I,A]; A61K0031-52 [I,A]; A61P0003-00 [I,C]; A61P0003-00 [I,A]; A61P0003-10 [I,A]; C07D0215-00 [I,C]; C07D0215-22 [I,A]; C07D0215-233 [I,A]; C07D0471-00 [I,C]; C07D0471-04 [I,A]; C07D0473-00 [I,C]; C07D0473-00 [I,A]; C07D0498-00 [I,C]; C07D0498-04 [I,A]
	ECLA	C07D215/22C; C07D471/04+239B+221B; C07D471/04+221B+221B+2; C07D473/00B2A; C07D487/04+249B+239B; C07D487/04+239C+231C; C07D487/04+239B+231B; C07D498/04+261B+239B; M07D
CA 2532971	IPCI	A61K0031-4375 [I,A]; A61K0031-4353 [I,C*]; A61K0031-47 [I,A]; A61K0031-519 [I,A]; A61K0031-52 [I,A]; A61P0003-00 [I,A]; A61P0003-10 [I,A]; C07D0215-22 [I,A]; C07D0215-00 [I,C*]; C07D0471-04 [I,A]; C07D0471-00 [I,C*]; C07D0473-00 [I,A]; C07D0487-04

		[I,A]; C07D0487-00 [I,C*]; C07D0498-04 [I,A]; C07D0498-00 [I,C*]
	IPCR	C07D0487-00 [I,C]; C07D0487-04 [I,A]; A61K0031-4353 [I,C]; A61K0031-4375 [I,A]; A61K0031-47 [I,C]; A61K0031-47 [I,A]; A61K0031-519 [I,C]; A61K0031-519 [I,A]; A61K0031-52 [I,A]; A61P0003-00 [I,C]; A61P0003-00 [I,A]; A61P0003-10 [I,A]; C07D0215-00 [I,C]; C07D0215-22 [I,A]; C07D0215-233 [I,A]; C07D0471-00 [I,C]; C07D0471-04 [I,A]; C07D0473-00 [I,C]; C07D0473-00 [I,A]; C07D0498-00 [I,C]; C07D0498-04 [I,A]
	ECLA	C07D215/22C; C07D471/04+221B+221B+2; C07D471/04+239B+221B; C07D473/00B2A; C07D487/04+239B+231B; C07D487/04+239C+231C; C07D487/04+249B+239B; C07D498/04+261B+239B
US 20050059650	IPCI	A61K0031-519 [I,A]; A61K0031-407 [I,A]; C07D0487-02 [I,A]; C07D0487-00 [I,C*]; C07D0471-12 [I,A]; C07D0471-00 [I,C*]
	IPCR	C07D0215-00 [I,C*]; C07D0215-233 [I,A]; C07D0471-00 [I,C*]; C07D0471-04 [I,A]; C07D0473-00 [I,C*]; C07D0473-00 [I,A]; C07D0487-00 [I,C*]; C07D0487-04 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; A61K0031-519 [I,C]; A61K0031-519 [I,A]; A61K0031-407 [I,C]; A61K0031-407 [I,A]; C07D0215-22 [N,A]; C07D0471-12 [I,A]; C07D0487-02 [I,A]
	NCL	514/210.210; 514/243.000; 514/248.000; 514/249.000; 514/259.410; 544/184.000; 544/236.000; 544/279.000; 544/350.000; 514/262.100; 514/303.000; 544/262.000; 546/119.000
	ECLA	C07D215/22C; C07D471/04+221B+221B+2; C07D471/04+239B+221B; C07D473/00B2A; C07D487/04+239B+231B; C07D487/04+239C+231C; C07D487/04+249B+239B; C07D498/04+261B+239B; M07D
EP 1644375	IPCI	C07D0487-04 [ICM,7]; C07D0487-00 [ICM,7,C*]; C07D0473-00 [ICS,7]; C07D0498-04 [ICS,7]; C07D0498-00 [ICS,7,C*]; C07D0471-04 [ICS,7]; C07D0471-00 [ICS,7,C*]; C07D0215-22 [ICS,7]; C07D0215-00 [ICS,7,C*]; A61K0031-519 [ICS,7]; A61K0031-52 [ICS,7]; A61K0031-4375 [ICS,7]; A61K0031-4353 [ICS,7,C*]; A61K0031-47 [ICS,7]; A61P0003-00 [ICS,7]; A61P0003-10 [ICS,7]
	IPCR	A61P0003-00 [I,C*]; A61P0003-00 [I,A]; A61P0003-10 [I,A]; C07D0215-00 [I,C*]; C07D0215-22 [N,A]; C07D0215-233 [I,A]; C07D0471-00 [I,C*]; C07D0471-04 [I,A]; C07D0473-00 [I,C*]; C07D0473-00 [I,A]; C07D0487-00 [I,C*]; C07D0487-04 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]
	ECLA	C07D215/22C; C07D471/04+239B+221B; C07D471/04+221B+221B+2; C07D473/00B2A; C07D487/04+249B+239B; C07D487/04+239C+231C; C07D487/04+239B+231B; C07D498/04+261B+239B; M07D
CN 1829718	IPCI	C07D0487-04 [I,A]; C07D0487-00 [I,C*]; C07D0473-00 [I,A]; C07D0498-04 [I,A]; C07D0498-00 [I,C*]; C07D0471-04 [I,A]; C07D0471-00 [I,C*]; C07D0215-22 [I,A]; C07D0215-00 [I,C*]; A61K0031-519 [I,A]; A61K0031-52 [I,A]; A61K0031-4375 [I,A]; A61K0031-4353 [I,C*]; A61K0031-47 [I,A]; A61P0003-00 [I,A]; A61P0003-10 [I,A]
BR 2004012689	IPCI	C07D0487-04 [ICS,7]; C07D0487-00 [ICS,7,C*]; A61K0031-4375 [ICS,7]; A61K0031-4353 [ICS,7,C*]; A61K0031-47 [ICS,7]; A61K0031-519 [ICS,7]; A61K0031-52 [ICS,7]; A61P0003-00 [ICS,7]; A61P0003-10 [ICS,7];

		C07D0215-22 [ICS,7]; C07D0215-00 [ICS,7,C*]; C07D0471-04 [ICS,7]; C07D0471-00 [ICS,7,C*]; C07D0473-00 [ICS,7]; C07D0498-04 [ICS,7]; C07D0498-00 [ICS,7,C*]
	IPCR	A61P0003-00 [I,C*]; C07D0215-00 [I,C*]; C07D0471-00 [I,C*]; C07D0473-00 [I,C*]; C07D0487-00 [I,C*]; C07D0498-00 [I,C*]; A61P0003-00 [I,A]; A61P0003-10 [I,A]; C07D0215-233 [I,A]; C07D0471-04 [I,A]; C07D0473-00 [I,A]; C07D0487-04 [I,A]; C07D0498-04 [I,A]
	ECLA	C07D215/22C; C07D471/04+239B+221B; C07D471/04+221B+221B+2; C07D473/00B2A; C07D487/04+249B+239B; C07D487/04+239C+231C; C07D487/04+239B+231B; C07D498/04+261B+239B; M07D
JP 2007531698	IPCI	C07D0401-12 [I,A]; C07D0401-00 [I,C*]; C07D0487-04 [I,A]; C07D0487-00 [I,C*]; A61K0031-519 [I,A]; C07D0473-30 [I,A]; C07D0473-00 [I,C*]; C07D0498-04 [I,A]; C07D0498-00 [I,C*]; A61K0031-4709 [I,A]; A61P0003-10 [I,A]; A61P0003-04 [I,A]; A61P0003-06 [I,A]; A61P0003-00 [I,C*]
	IPCR	C07D0401-00 [I,C]; C07D0401-12 [I,A]; A61K0031-4709 [I,C]; A61K0031-4709 [I,A]; A61K0031-519 [I,C]; A61K0031-519 [I,A]; A61P0003-00 [I,C]; A61P0003-00 [I,A]; A61P0003-04 [I,A]; A61P0003-06 [I,A]; A61P0003-10 [I,A]; C07D0215-00 [I,C*]; C07D0215-22 [N,A]; C07D0215-233 [I,A]; C07D0471-00 [I,C*]; C07D0471-04 [I,A]; C07D0473-00 [I,C]; C07D0473-00 [I,A]; C07D0473-30 [I,A]; C07D0487-00 [I,C]; C07D0487-04 [I,A]; C07D0498-00 [I,C]; C07D0498-04 [I,A]
	FTERM	4C050/AA01; 4C050/BB05; 4C050/BB06; 4C050/CC08; 4C050/EE04; 4C050/EE05; 4C050/FF02; 4C050/GG03; 4C050/HH04; 4C063/AA01; 4C063/BB06; 4C063/CC14; 4C063/DD10; 4C063/EE01; 4C072/AA01; 4C072/BB02; 4C072/CC03; 4C072/CC11; 4C072/EE02; 4C072/FF09; 4C072/GG07; 4C072/HH02; 4C072/HH07; 4C072/UU01; 4C086/AA01; 4C086/AA02; 4C086/AA03; 4C086/CB06; 4C086/CB07; 4C086/CB08; 4C086/CB22; 4C086/MA01; 4C086/MA04; 4C086/NA14; 4C086/ZA70; 4C086/ZC33; 4C086/ZC35
SG 144942	IPCI	A61K [ICM,7]
IN 2006KN00071	IPCI	C07D0487-04 [ICM,7]; C07D0487-00 [ICM,7,C*]; C07D0473-00 [ICS,7]; C07D0498-04 [ICS,7]; C07D0498-00 [ICS,7,C*]; C07D0471-04 [ICS,7]; C07D0471-00 [ICS,7,C*]; C07D0215-22 [ICS,7]; C07D0215-00 [ICS,7,C*]
KR 2006056944	IPCI	C07D0487-04 [I,A]; C07D0487-00 [I,C*]; C07D0471-04 [I,A]; C07D0471-00 [I,C*]; C07D0498-04 [I,A]; C07D0498-00 [I,C*]
MX 2006000554	IPCI	A61K0031-4375 [ICM,7]; A61K0031-4353 [ICM,7,C*]; A61K0031-47 [ICS,7]; A61K0031-519 [ICS,7]; A61K0031-52 [ICS,7]; A61P0003-00 [ICS,7]; A61P0003-10 [ICS,7]; C07D0215-22 [ICS,7]; C07D0215-00 [ICS,7,C*]; C07D0471-04 [ICS,7]; C07D0471-00 [ICS,7,C*]; C07D0473-00 [ICS,7]; C07D0487-04 [ICS,7]; C07D0487-00 [ICS,7,C*]; C07D0498-04 [ICS,7]; C07D0498-00 [ICS,7,C*]
	ECLA	C07D215/22C; C07D471/04+239B+221B; C07D471/04+221B+221B+2; C07D473/00B2A; C07D487/04+249B+239B; C07D487/04+239C+231C; C07D487/04+239B+231B; C07D498/04+261B+239B; M07D
NO 2006000688	IPCI	C07D0215-00 [I,C]; C07D0215-233 [I,A]
	IPCR	C07D0215-00 [I,C]; C07D0215-233 [I,A]; A61P0003-00 [I,C*]; A61P0003-00 [I,A]; A61P0003-10 [I,A]; C07D0215-22 [N,A]; C07D0471-00 [I,C*]; C07D0471-04 [I,A]; C07D0473-00 [I,C*]; C07D0473-00 [I,A];

C07D0487-00 [I,C*]; C07D0487-04 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]
 ECLA C07D215/22C; C07D471/04+239B+221B;
 C07D471/04+221B+221B+2; C07D473/00B2A;
 C07D487/04+249B+239B; C07D487/04+239C+231C;
 C07D487/04+239B+231B; C07D498/04+261B+239B; M07D
 US 20060142262 IPCI A61K0031-519 [I,A]; C07D0487-02 [I,A]; C07D0487-00 [I,C*]
 IPCR A61K0031-519 [I,A]; A61K0031-519 [I,C]; C07D0215-00 [I,C*]; C07D0215-233 [I,A]; C07D0471-00 [I,C*];
 C07D0471-04 [I,A]; C07D0473-00 [I,C*]; C07D0473-00 [I,A]; C07D0487-00 [I,C]; C07D0487-02 [I,A];
 C07D0487-04 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]
 NCL 514/210.210; 514/262.100; 544/262.000
 ECLA C07D215/22C; C07D471/04+221B+221B+2;
 C07D471/04+239B+221B; C07D473/00B2A;
 C07D487/04+239B+231B; C07D487/04+239C+231C;
 C07D487/04+249B+239B; C07D498/04+261B+239B; M07D
 US 20070072844 IPCI A61K0031-551 [I,A]; A61K0031-519 [I,A]; C07D0487-02 [I,A]; C07D0487-00 [I,C*]
 IPCR A61K0031-551 [I,C]; A61K0031-551 [I,A]; A61K0031-519 [I,C]; A61K0031-519 [I,A]; A61P0003-00 [I,C*];
 A61P0003-00 [I,A]; A61P0003-10 [I,A]; C07D0215-00 [I,C*]; C07D0215-233 [I,A]; C07D0471-00 [I,C*];
 C07D0471-04 [I,A]; C07D0473-00 [I,C*]; C07D0473-00 [I,A]; C07D0487-00 [I,C]; C07D0487-02 [I,A];
 C07D0487-04 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]
 NCL 514/218.000; 514/252.160; 514/262.100; 540/575.000; 544/262.000
 ECLA C07D215/22C; C07D471/04+239B+221B;
 C07D471/04+221B+221B+2; C07D473/00B2A;
 C07D487/04+249B+239B; C07D487/04+239C+231C;
 C07D487/04+239B+231B; C07D498/04+261B+239B; M07D
 US 20070082874 IPCI A61K0031-519 [I,A]; A61K0031-675 [I,A]; C07F0009-6512 [I,A]; C07F0009-00 [I,C*]; C07D0487-04 [I,A];
 C07D0487-00 [I,C*]
 IPCR A61K0031-519 [I,C]; A61K0031-519 [I,A]; A61K0031-675 [I,C]; A61K0031-675 [I,A]; A61P0003-00 [I,C*];
 A61P0003-00 [I,A]; A61P0003-10 [I,A]; C07D0215-00 [I,C*]; C07D0215-233 [I,A]; C07D0471-00 [I,C*];
 C07D0471-04 [I,A]; C07D0473-00 [I,C*]; C07D0473-00 [I,A]; C07D0487-00 [I,C]; C07D0487-04 [I,A];
 C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07F0009-00 [I,C]; C07F0009-6512 [I,A]
 NCL 514/081.000; 514/262.100; 544/244.000; 544/262.000
 ECLA C07D215/22C; C07D471/04+239B+221B;
 C07D471/04+221B+221B+2; C07D473/00B2A;
 C07D487/04+249B+239B; C07D487/04+239C+231C;
 C07D487/04+239B+231B; C07D498/04+261B+239B; M07D
 OS CASREACT 142:176857; MARPAT 142:176857
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compds. I [wherein A, B = independently (un)substituted alkylene; D = O, S, SO, SO₂, etc.; E = N, C, CH and derivs.; K = (un)substituted cyclo/alkylene; Q = NH and derivs.; O, S, SO, SO₂; T, M, J = independently

N, CH and derivs.; U, W, Z = independently C, N; V = a bond, N, CH and derivs.; X, Y = independently O, S, N, CH and derivs.; NH and derivs.; Ar1 = (unsubstituted hetero/aryl; their pharmaceutically acceptable salts, hydrates and solvates) were prepared as modulators, in particular agonists and inverse agonists of G-coupled protein receptor (RUP3), for treating diabetes, hyperglycemia and other metabolic disorders. Ten biol. examples are given. For example, II was prepared, in 5 steps, from 4-(methylsulfonyl)phenylhydrazine•HCl, ethoxymethylenemalononitrile and 4-chloro-1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidine. Selected I displayed EC50 < 10 µM in a melanophore-based pigment dispersion assay. Selected RUP3 agonists I lowered blood glucose levels in rats in an oral glucose tolerance test. Thus, I are useful in the prophylaxis or treatment of metabolic disorders and complications thereof, such as, diabetes and obesity.

- ST pyrazolopyrimidine prepn metab G coupled protein receptor inverse agonist; diabetes obesity G coupled protein receptor agonist pyrazolopyrimidine prepn; hyperglycemia antidiabetic hypertriglyceridemia hypercholesterolemia fused aryl heteroaryl prepn
- IT G protein-coupled receptors
 - RL: BSU (Biological study, unclassified); BIOL (Biological study) (agonists; preparation of fused aryl and heteroaryl derivs., in particular pyrazolopyrimidines, as modulators of G-coupled protein receptor and their use in treatment of diabetes, hyperglycemia and related diseases)
- IT Autoimmune disease
 - (insulin-dependent diabetes mellitus, treatment; preparation of fused aryl and heteroaryl derivs., in particular pyrazolopyrimidines, as modulators of G-coupled protein receptor and their use in treatment of diabetes, hyperglycemia and related diseases)
- IT Diabetes mellitus
 - (insulin-dependent, treatment; preparation of fused aryl and heteroaryl derivs., in particular pyrazolopyrimidines, as modulators of G-coupled protein receptor and their use in treatment of diabetes, hyperglycemia and related diseases)
- IT G protein-coupled receptors
 - RL: BSU (Biological study, unclassified); BIOL (Biological study) (inverse agonists; preparation of fused aryl and heteroaryl derivs., in particular pyrazolopyrimidines, as modulators of G-coupled protein receptor and their use in treatment of diabetes, hyperglycemia and related diseases)
- IT Metabolic disorders
 - (metabolic syndrome X, treatment; preparation of fused aryl and heteroaryl derivs., in particular pyrazolopyrimidines, as modulators of G-coupled protein receptor and their use in treatment of diabetes, hyperglycemia and related diseases)
- IT Diabetes mellitus
 - (non-insulin-dependent, treatment; preparation of fused aryl and heteroaryl derivs., in particular pyrazolopyrimidines, as modulators of G-coupled protein receptor and their use in treatment of diabetes, hyperglycemia and related diseases)
- IT Anticholesteremic agents
 - Antidiabetic agents
 - Human
 - Hypolipemic agents
 - (preparation of fused aryl and heteroaryl derivs., in particular pyrazolopyrimidines, as modulators of G-coupled protein receptor and their use in treatment of diabetes, hyperglycemia and related diseases)
- IT Hypercholesterolemia
 - Hyperglycemia
 - Hypertriglyceridemia
 - Metabolic disorders
 - Dyslipidemia
 - Hyperlipidemia

RL: BIOL (Biological study)

(treatment; preparation of fused aryl and heteroaryl derivs., in particular pyrazolopyrimidines, as modulators of G-coupled protein receptor and their use in treatment of diabetes, hyperglycemia and related diseases)

IT 832714-06-4P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid tert-butyl ester 832714-19-9P, 1-(4-Methylsulfonylphenyl)-4-[(piperidin-4-yl)oxy]-1H-pyrazolo[3,4-d]pyrimidine 832714-42-8P, 1-(2-Fluoro-4-methylsulfonylphenyl)-4-[(piperidin-4-yl)oxy]-1H-pyrazolo[3,4-d]pyrimidine 832714-45-1P, 4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid tert-butyl ester 832714-89-3P 832715-06-7P 832715-08-9P, 4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]sulfonyl]piperidine-1-carboxylic acid tert-butyl ester 832715-45-4P, (5-Aminopyridin-2-yl)[4-[[1-(2-fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone trifluoroacetate 832715-50-1P, 4-[[1-(4-Bromophenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832715-72-7P, trans-[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]cyclohexyl]carbamic acid tert-butyl ester 832716-02-6P 832716-69-5P, 4-(1-Benzylazetidin-3-yloxy)-1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidine 832717-22-3P, 4-[[3-(4-Methylsulfonylphenyl)isoxazolo[4,5-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid tert-butyl ester

RL: PACT (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(drug candidate; preparation of fused aryl and heteroaryl derivs., in particular pyrazolopyrimidines, as modulators of G-coupled protein receptor and their use in treatment of diabetes, hyperglycemia and related diseases)

IT 352530-44-0P, 2-Fluoro-4-bromophenylzinc iodide 832714-09-7P, 4-[[1-(4-Methylsulfonylphenyl)-3-methyl-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid tert-butyl ester 832714-13-3P, 4-[[1-(4-Methylsulfonylphenyl)-3,6-dimethyl-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid tert-butyl ester 832714-17-7P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isobutyl ester 832714-18-8P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832714-20-2P, [4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]pyridin-3-ylmethanone 832714-21-3P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid butyl ester 832714-23-5P, 4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]sulfonyl]piperidine-1-carboxylic acid cyclopropylmethyl ester 832714-25-7P, 4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]sulfonyl]piperidine-1-carboxylic acid cyclobutylmethyl ester 832714-26-8P, 4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]sulfonyl]piperidine-1-carboxylic acid 2-cyclopropylethyl ester 832714-27-9P, (5-Bromofuran-2-yl)[4-[[1-(2-fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]sulfonyl]piperidin-1-yl]methanone 832714-28-0P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid pentyl ester 832714-29-1P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid 1-ethylpropyl ester 832714-30-4P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid 2-ethylbutyl ester 832714-31-5P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid cyclopentylmethyl ester 832714-32-6P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-

yl)oxy]piperidine-1-carboxylic acid 2,2-dimethylpropyl ester
 832714-33-7P, (5-Butylpyridin-2-yl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-34-8P, (4-Difluoromethoxyphenyl)[4-[[1-(2-fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-36-0P, 1-(2-Fluoro-4-methylsulfonylphenyl)-4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-1H-pyrazolo[3,4-d]pyrimidine 832714-40-6P, 2-[4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]-1-(4-trifluoromethoxyphenyl)ethanone 832714-43-9P, 2-[4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]-1-(3-fluorophenyl)ethanone 832714-44-0P, 2-[4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]-1-(pyridin-2-yl)ethanone 832714-46-2P, 4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832714-50-8P, (4-Ethylpyridin-2-yl)[4-[[1-(2-fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-51-9P, (5-Bromopyridin-3-yl)[4-[[1-(2-fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-52-0P, (5-Ethylpyridin-2-yl)[4-[[1-(2-fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-53-1P, (4-Ethoxyphenyl)[4-[[1-(2-fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-54-2P, (5-Butylpyridin-2-yl)[4-[[1-(2-fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-55-3P, [4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl](5-isopropoxymethylpyridin-2-yl)methanone 832714-59-7P, [4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl](5-isopropoxy-pyridin-2-yl)methanone 832714-61-1P, 4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]-5'-isopropoxy-3,4,5,6-tetrahydro-2H-[1,2']bipyridinyl 832714-63-3P, 1-(2-Fluoro-4-methylsulfonylphenyl)-4-[[1-(4-trifluoromethoxyphenyl)piperidin-4-yl]oxy]-1H-pyrazolo[3,4-d]pyrimidine 832714-64-4P, 1-(2-Fluoro-4-methylsulfonylphenyl)-4-[[1-(3-trifluoromethoxyphenyl)piperidin-4-yl]oxy]-1H-pyrazolo[3,4-d]pyrimidine 832714-65-5P, 5'-Fluoro-4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]-3,4,5,6-tetrahydro-2H-[1,2']bipyridinyl 832714-66-6P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]-5'-methyl-3,4,5,6-tetrahydro-2H-[1,2']bipyridinyl 832714-67-7P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]-6'-trifluoromethyl-3,4,5,6-tetrahydro-2H-[1,2']bipyridinyl 832714-68-8P, (5'-Fluoro-3,4,5,6-tetrahydro-2H-[1,2']bipyridinyl-4-yl)[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amine 832714-69-9P, (6-Chloropyridin-3-yl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-70-2P, (5-Chloropyridin-3-yl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-71-3P, [4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl](1-methyl-3-trifluoromethyl-1H-pyrazol-4-yl)methanone 832714-72-4P, (2-Chloropyridin-4-yl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-74-6P, (4-Hydroxy-3-methoxyphenyl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-75-7P, (4-Chloro-3-nitrophenyl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-76-8P, 1-[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]-3-methylbutan-1-one 832714-77-9P, [4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl][6-(pyrazol-1-yl)pyridin-3-yl]methanone 832714-78-0P, (2-Hydroxypyridin-3-yl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-79-1P,

(5,6-Dichloropyridin-3-yl) [4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-80-4P,
 (5-Bromopyridin-3-yl) [4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-81-5P,
 5-[[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]carbonyl]nicotinic acid 832714-82-6P,
 (1H-Imidazol-4-yl) [4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-83-7P,
 [4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl] [6-(pyrrolidin-1-yl)pyridin-3-yl]methanone 832714-84-8P, (6-Isobutylaminopyridin-3-yl) [4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-85-9P, (6-Ethylaminopyridin-3-yl) [4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-86-0P, [6-(Cyclobutylamino)pyridin-3-yl] [4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-87-1P, (6-Isopropylaminopyridin-3-yl) [4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-88-2P, [6-(1-Ethylpropylamino)pyridin-3-yl] [4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-91-7P, [4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl] [6-(1-propylbutylamino)pyridin-3-yl]methanone 832714-93-9P 832714-94-0P, (Benzo[c]isoxazol-3-yl) [4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-96-2P, (4-Chloropyridin-2-yl) [4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832714-98-4P, 1-[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]butan-2-one 832715-00-1P 832715-01-2P, 5'-Bromo-4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]-3,4,5,6-tetrahydro-2H-[1,2']bipyridinyl 832715-02-3P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]-5'-trifluoromethyl-3,4,5,6-tetrahydro-2H-[1,2']bipyridinyl 832715-04-5P, 1-[2-Fluoro-4-(methylsulfonylphenyl)-4-[[1-(3-isopropyl-1,2,4-oxadiazol-5-yl)-3-pyrrolidinyl]oxy]-1H-pyrazolo[3,4-d]pyrimidine hydrochloride 832715-07-8P, 1-[4-(Methylsulfonylphenyl)-4-[[1-(4-(trifluoromethoxy)phenyl)-4-piperidinyl]oxy]-1H-pyrazolo[3,4-d]pyrimidine hydrochloride 832715-09-0P, 4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]sulfonyl]piperidine-1-carboxylic acid isopropyl ester 832715-10-3P, [4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl] (5-methylpyridin-3-yl)methanone 832715-11-4P, [4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl] (5-methylpyridin-3-yl)methanone trifluoroacetate 832715-12-5P, [4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl] (6-trifluoromethylpyridin-3-yl)methanone 832715-13-6P, [4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl] (6-trifluoromethylpyridin-3-yl)methanone trifluoroacetate 832715-14-7P, 2-(5-Bromopyridin-3-yl)-1-[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]ethanone 832715-15-8P, 2-(5-Bromopyridin-3-yl)-1-[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]ethanone trifluoroacetate 832715-16-9P, (6-Fluoropyridin-2-yl) [4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832715-17-0P, (6-Fluoropyridin-2-yl) [4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone trifluoroacetate 832715-18-1P, (6-Chloropyridin-2-yl) [4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832715-19-2P, (6-Chloropyridin-2-yl) [4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone trifluoroacetate 832715-20-5P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl] [5-(2-methylpyrrolidin-1-yl)methyl]pyridin-3-

yl)methanone 832715-21-6P, [4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl][5-[(2-methylpyrrolidin-1-yl)methyl]pyridin-3-yl]methanone trifluoroacetate 832715-22-7P, 5-[[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]carbonyl]nicotinonitrile 832715-23-8P, 5-[[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]carbonyl]nicotinonitrile trifluoroacetate 832715-24-9P, 5-[[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]carbonyl]pyridine-2-carboxylic acid methyl ester 832715-25-0P, 5-[[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]carbonyl]pyridine-2-carboxylic acid methyl ester trifluoroacetate 832715-26-1P, [4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]acetic acid ethyl ester 832715-27-2P, [4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]acetic acid ethyl ester trifluoroacetate 832715-28-3P, 1-(4-Chlorophenyl)-2-[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]ethanone 832715-29-4P, 1-(4-Chlorophenyl)-2-[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]ethanone trifluoroacetate 832715-30-7P, 2-[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]-1-(3-trifluoromethylphenyl)ethanone 832715-31-8P, 2-[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]-1-(3-trifluoromethylphenyl)ethanone trifluoroacetate 832715-32-9P, 1-(4-Chloro-3-methylphenyl)-2-[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]ethanone 832715-33-0P, 1-(4-Chloro-3-methylphenyl)-2-[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]ethanone trifluoroacetate 832715-34-1P, 1-(3,4-Dichlorophenyl)-2-[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]ethanone 832715-35-2P, 1-(3,4-Dichlorophenyl)-2-[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]ethanone trifluoroacetate 832715-36-3P, 1-(2,4-Dimethoxyphenyl)-2-[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]ethanone 832715-37-4P, 1-(2,4-Dimethoxyphenyl)-2-[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]ethanone trifluoroacetate 832715-38-5P, 1-(4-Difluoromethoxyphenyl)-2-[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]ethanone 832715-39-6P, 1-(4-Difluoromethoxyphenyl)-2-[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]ethanone trifluoroacetate 832715-40-9P, 1-(4-Diethylaminophenyl)-2-[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]ethanone 832715-41-0P, 1-(4-Diethylaminophenyl)-2-[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]ethanone trifluoroacetate 832715-42-1P, (5-Aminopyridin-2-yl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832715-43-2P, (5-Aminopyridin-2-yl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone trifluoroacetate 832715-44-3P, (5-Aminopyridin-2-yl)[4-[[1-(2-fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832715-46-5P, (5-Ethylaminopyridin-2-yl)[4-[[1-(2-fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832715-47-6P, (5-Ethylaminopyridin-2-yl)[4-[[1-(2-fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone trifluoroacetate 832715-48-7P, [4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl][5-(3-methylbutylamino)pyridin-2-yl]methanone 832715-49-8P, [4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl][5-(3-methylbutylamino)pyridin-2-yl]methanone

trifluoroacetate 832715-53-4P, 4-[[1-(4-Propylaminophenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832715-54-5P, 4-[[1-(4-Isopropylaminophenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832715-55-6P, 4-[[1-(4-(Morpholin-4-yl)phenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832715-56-7P, 4-[[1-(2-Fluoro-4-isopropylaminophenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832715-58-9P, 4-[[1-(2-Fluoro-4-(morpholin-4-yl)phenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832715-59-0P, 4-[[1-(4-[(2-Methylsulfonyl)ethyl]piperazin-1-yl)-2-methylphenyl]-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832715-61-4P, 4-[[1-(2-Methyl-4-[(tetrahydrofuran-2-ylmethyl)amino]phenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832715-62-5P, 4-[[1-(4-Cyclopropylamino-2-methylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832715-63-6P, 4-[[1-(4-(2-Dimethylaminoethylamino)-2-methylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832715-64-7P, 4-[[1-(4-[(2-Methylsulfonyl)ethyl](methyl)amino]phenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832715-65-8P, 4-[[1-(4-(2-Methoxyethylamino)phenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832715-66-9P, 4-[[1-(4-[(Tetrahydrofuran-2-ylmethyl)amino]phenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832715-67-0P, 4-[[1-(4-[(2-Methylsulfonyl)ethyl]piperazin-1-yl)phenyl]-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832715-68-1P, 4-[[1-(4-Aminophenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832715-69-2P, 4-[[1-(5-Ethylpyrimidin-2-yl)piperidin-4-ylsulfanyl]-1-(2-fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidine 832715-70-5P, 3-tert-Butoxy-1-[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]propan-1-one 832715-71-6P, [3-[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]-3-oxopropyl](methyl)carbamic acid tert-butyl ester 832715-73-8P, trans-N-[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]cyclohexane-1,4-diamine 832715-74-9P, cis-N-[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]cyclohexyl]nicotinamide 832715-75-0P 832715-76-1P, cis-[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]methyl]cyclohexyl]carbamic acid tert-butyl ester 832715-77-2P, cis-N-[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]cyclohexyl]methyl]nicotinamide 832715-78-3P, cis-N-[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]cyclohexyl]methyl]-6-methylnicotinamide 832715-79-4P, 4-[2-[Ethyl[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]ethyl]piperazine-1-carboxylic acid tert-butyl ester 832715-80-7P, 4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]isopropylamino]methyl]piperidine-1-carboxylic acid tert-butyl ester 832715-81-8P, 4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]isopropylamino]methyl]piperidine-1-carboxylic acid isopropyl ester 832715-82-9P, 4-[[1-(2-Fluoro-4-sulfamoylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832715-83-0P, (1-tert-Butyl-5-methyl-1H-pyrazolo[4-yl])[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832715-84-1P, (5-tert-Butyl-2-methyl-2H-pyrazolo[3-yl])[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832715-85-2P, (3-Fluorophenyl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832715-87-4P, 1-(2-Fluoro-4-methylsulfonylphenyl)-4-[[1-[(3-isopropyl-1,2,4-oxadiazol-5-

yl)methyl]piperidin-4-yl]oxy]-1H-pyrazolo[3,4-d]pyrimidine 832715-88-5P
 , 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]piperidine-1-carboxylic acid isopropyl ester 832715-90-9P,
 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]piperidine-1-carboxylic acid isobutyl ester 832715-91-0P,
 [3-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]piperidin-1-yl](6-methylpyridin-3-yl)methanone 832715-93-2P,
 [3-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]piperidin-1-yl](2-methylpyridin-3-yl)methanone 832715-94-3P,
 [3-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]piperidin-1-yl](5-methylpyridin-3-yl)methanone 832715-95-4P,
 [3-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]piperidin-1-yl]pyridin-3-ylmethanone 832715-96-5P,
 [3-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]piperidin-1-yl](1-methyl-1H-pyrrrol-3-yl)methanone 832715-97-6P,
 [4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl](4-trifluoromethylpyridin-3-yl)methanone 832715-98-7P, (6-tert-Butylpyridin-3-yl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832716-00-4P,
 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]methyl]piperidine-1-carboxylic acid tert-butyl ester 832716-01-5P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]methyl]amino]methyl]piperidine-1-carboxylic acid tert-butyl ester 832716-03-7P, 3-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]methyl]piperidine-1-carboxylic acid tert-butyl ester 832716-04-8P, 4-[[Ethyl[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]methyl]piperidine-1-carboxylic acid tert-butyl ester 832716-05-9P, 4-[[1-[2-(2-Dimethylaminoethoxy)-4-methylsulfonylphenyl]-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid tert-butyl ester 832716-08-2P, 4-[[1-(2-Dimethylaminoethyl)[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]methyl]piperidine-1-carboxylic acid tert-butyl ester 832716-11-7P, 4-[[1-(2-Dimethylaminoethyl)[1-(2-fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]methyl]piperidine-1-carboxylic acid tert-butyl ester 832716-13-9P, [4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl](4-trifluoromethoxyphenyl)methanone 832716-15-1P, [4-[[1-[3,5-Bis(trifluoromethyl)phenyl]-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]cyclohexyl]carbamic acid tert-butyl ester 832716-17-3P, 4-[[1-[3,5-Bis(trifluoromethyl)phenyl]-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid tert-butyl ester 832716-19-5P 832716-21-9P, 4-[[1-(3-Fluorophenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid tert-butyl ester 832716-23-1P, [4-[[1-(3-Fluorophenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]cyclohexyl]carbamic acid tert-butyl ester 832716-25-3P, cis-[4-[[1-(2,4-Difluorophenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]cyclohexyl]carbamic acid tert-butyl ester 832716-26-4P, 4-[[1-(2,4-Difluorophenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid tert-butyl ester 832716-28-6P, trans-[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]cyclohexyl]carbamic acid tert-butyl ester 832716-30-0P, N-[1-(2,4-Difluorophenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]cyclohexane-1,4-diamine 832716-32-2P, 4-[[1-(2,5-Difluorophenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid tert-butyl ester 832716-33-3P, 4-[[1-[4-(2-Methylsulfonylphenyl)phenyl]-1H-pyrazolo[3,4-d]pyrimidin-4-yl](methyl)amino]methyl]piperidine-1-carboxylic acid tert-butyl ester 832716-35-5P, 4-[[1-(2,5-Difluorophenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl](methyl)amino]methyl]piperidine-1-carboxylic acid tert-butyl ester 832716-36-6P, 4-[[1-(2-Methyl-4-propylaminophenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832716-37-7P, 4-[[1-(4-Isopropylamino-2-methylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-

yl)oxy]piperidine-1-carboxylic acid isopropyl ester 832716-38-8P,
 4-[[1-(2-Methyl-4-(morpholin-4-yl)phenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832716-39-9P,
 4-[[1-(4-(2-Methoxyethylamino)-2-methylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832716-41-3P,
 4-[[1-(4-[(2-Methylsulfonyl)ethyl](methyl)amino)-2-methylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832716-42-4P, [2-[4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]-5-methylpyrimidin-4-yl]dimethylamine 832716-46-8P, Furan-2-yl[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832716-47-9P, [4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl](1-methyl-1H-pyrrol-2-yl)methanone 832716-48-0P, 2-[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]-1-(pyridin-3-yl)ethanone 832716-49-1P, 2-[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]-1-(thiophen-2-yl)ethanone 832716-50-4P, 1-[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]-3,3-dimethylbutan-2-one 832716-51-5P, [4-[[1-(4-Methylsulfonylphenyl)pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl](2-methylpyridin-3-yl)methanone 832716-52-6P, [4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl](6-methylpyridin-3-yl)methanone 832716-53-7P, [4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl](5-methylisoxazol-3-yl)methanone 832716-54-8P, 4-[[6-Dimethylamino-1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid tert-butyl ester 832716-57-1P, 4-[[[Ethyl[1-(2-fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]methyl]piperidine-1-carboxylic acid isopropyl ester 832716-58-2P, 4-[[1-(2-Dimethylamino-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid tert-butyl ester 832716-60-6P, 4-[2-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]ethyl]piperazine-1-carboxylic acid ethyl ester 832716-61-7P, 4-[2-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]propyl]piperazine-1-carboxylic acid ethyl ester 832716-62-8P, (5-Fluoropyridin-2-yl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832716-63-9P, (2-Chloro-5-fluoropyridin-3-yl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832716-64-0P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl](4-methoxypyridin-2-yl)methanone 832716-65-1P, (2-Fluoropyridin-3-yl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832716-66-2P, (6-Fluoropyridin-3-yl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832716-67-3P, (4-Todopyridin-2-yl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832716-68-4P, [4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl](4-methoxythiophen-3-yl)methanone 832716-70-8P, 3-[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]azetidine-1-carboxylic acid isopropyl ester 832716-72-0P, 4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl](3-trifluoromethoxyphenyl)methanone 832716-73-1P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid propyl ester 832716-74-2P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid cyclohexyl ester 832716-75-3P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid tetrahydropyran-4-yl ester 832716-76-4P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid cyclopentyl ester 832716-78-6P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-

yl]oxy]piperidine-1-carboxylic acid tetrahydrothiopyran-4-yl ester
832716-79-7P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid cyclobutyl ester
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of fused aryl and heteroaryl derivs., in particular pyrazolopyrimidines, as modulators of G-coupled protein receptor and their use in treatment of diabetes, hyperglycemia and related diseases)

- IT 832716-80-0P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid pyridin-3-ylmethyl ester
832716-81-1P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid 2-(pyridin-3-yl)ethyl ester
832716-82-2P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid 3-(pyridin-3-yl)propyl ester
832716-83-3P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid 2-dimethylaminoethyl ester
832716-84-4P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl] (methyl)amino]piperidine-1-carboxylic acid tert-butyl ester
832716-85-5P, 1-[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl] (methyl)amino]piperidin-1-yl]-3,3-dimethylbutan-2-one
832716-86-6P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl] (methyl)amino]piperidine-1-carboxylic acid cyclobutyl ester
832716-87-7P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]sulfonyl]piperidine-1-carboxylic acid tert-butyl ester 832716-88-8P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]sulfinyl]piperidine-1-carboxylic acid tert-butyl ester 832716-89-9P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]sulfonyl]piperidine-1-carboxylic acid tert-butyl ester 832716-90-2P, 4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]sulfonyl]piperidine-1-carboxylic acid butyl ester 832716-92-4P, 4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]sulfonyl]piperidine-1-carboxylic acid 2-methoxyethyl ester 832716-93-5P, 4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]sulfonyl]piperidine-1-carboxylic acid 3,3-dimethylbutyl ester 832716-94-6P, 4-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]sulfonyl]piperidine-1-carboxylic acid 4-methylpentyl ester 832716-95-7P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-yl][5-(morpholin-4-yl)methyl]furan-2-yl]methanone 832716-96-8P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid 2-(pyrrolidin-1-yl)ethyl ester 832716-97-9P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid 2-(morpholin-4-yl)ethyl ester 832716-98-0P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid ethyl ester 832716-99-1P, Ethyl[1-(2-fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]](3,4,5,6-tetrahydro-2H-[1,2']bipyridinyl-4-yl)methyl]amine 832717-01-8P, Ethyl[1-(2-fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]](5'-trifluoromethyl-3,4,5,6-tetrahydro-2H-[1,2']bipyridinyl-4-yl)methyl]amine 832717-02-9P 832717-05-2P, 3-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]pyrrolidine-1-carboxylic acid tert-butyl ester 832717-06-3P, 3-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]pyrrolidine-1-carboxylic acid tert-butyl ester 832717-07-4P, 3-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]pyrrolidine-1-carboxylic acid isopropyl ester 832717-09-6P, 3-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]pyrrolidine-1-carboxylic acid tert-butyl ester 832717-10-9P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl][5-(pyridin-2-yl)thiophen-2-yl]methanone

832717-11-0P, 4-[[9-(6-Methylsulfonylpyridin-3-yl)-9H-purin-6-yl]oxy]piperidine-1-carboxylic acid isobutyl ester 832717-12-1P, 9-(6-Methylsulfonylpyridin-3-yl)-6-[(piperidin-4-yl)oxy]-9H-purine 832717-13-2P, 4-[[9-(6-Methylsulfonylpyridin-3-yl)-9H-purin-6-yl]oxy]piperidin-1-yl]pyridin-3-ylmethanone 832717-14-3P, 4-[[9-(4-Methylsulfonylphenyl)-9H-purin-6-yl]oxy]piperidine-1-carboxylic acid tert-butyl ester 832717-17-6P, 4-[[9-(6-Methylsulfonylpyridin-3-yl)-9H-purin-6-yl]oxy]piperidine-1-carboxylic acid tert-butyl ester 832717-19-8P, 4-[[9-(2-Fluoro-4-methylsulfonylphenyl)-9H-purin-6-yl]oxy]piperidine-1-carboxylic acid tert-butyl ester 832717-20-1P, 4-[[3-(4-Methylsulfonylphenyl)-3H-[1,2,3]triazolo[4,5-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid tert-butyl ester 832717-30-3P, 4-[[Ethyl[3-(4-methylsulfonylphenyl)isoxazolo[4,5-d]pyrimidin-7-yl]amino]methyl]piperidine-1-carboxylic acid tert-butyl ester 832717-31-4P, 4-[[3-(4-Methylsulfonylphenyl)isoxazolo[4,5-d]pyrimidin-7-yl]sulfonyl]piperidine-1-carboxylic acid tert-butyl ester 832717-32-5P, 4-[[3-(4-Methylsulfonylphenyl)isoxazolo[4,5-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832717-33-6P, 4-[8-(4-Bromo-2-fluorophenyl)quinolin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832717-37-0P, 4-[[8-(4-Methylsulfonylphenyl)quinolin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832717-39-2P, 4-[[8-(4-Methylsulfonylphenyl)quinolin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832717-40-5P, 4-[8-(4-Isopropoxyphenyl)quinolin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832717-41-6P, 2-[4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]-1-(pyridin-2-yl)ethanone 832717-42-7P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]pyrazin-2-ylmethanone 832717-43-8P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl] (5-methylpyrazin-2-yl)methanone 832717-44-9P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]pyrimidin-5-ylmethanone 832717-45-0P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]pyridazin-4-ylmethanone 832717-46-1P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]thiophen-2-ylmethanone 832717-47-2P, (3,4-Dimethylisoxazol-5-yl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832717-48-3P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl] (4-methyl-[1,2,3]thiadiazol-5-yl)methanone 832717-49-4P, (2,5-Dimethyl-2H-pyrazol-3-yl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832717-50-7P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl] (3-methylisoxazol-5-yl)methanone 832717-51-8P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carbothioic acid N-(pyridin-4-yl)amide 832717-52-9P, 3-[[1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]amino]piperidine-1-carboxylic acid tert-butyl ester 832717-53-0P, (2,5-Dimethylfuran-3-yl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832717-54-1P, 1-(2-Fluoro-4-methylsulfonylphenyl)-4-[[1-[(3-isopropyl-[1,2,4]oxadiazol-5-yl)methyl]pyrrolidin-3-yl]oxy]-1H-pyrazolo[3,4-d]pyrimidine 832717-55-2P, 4-[[1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl] (6-methylpyridin-2-yl)methanone 832717-56-3P, (2-Fluoropyridin-4-yl)[4-[[1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidin-1-yl]methanone 832717-57-4P, 1-(4-Methylsulfonylphenyl)-4-[[1-(4-trifluoromethoxyphenyl)piperidin-4-yl]oxy]-1H-pyrazolo[3,4-d]pyrimidine 832717-58-5P, 1-(2-Fluoro-4-methylsulfonylphenyl)-4-[[1-[5-methyl-4-(pyrrolidin-1-yl)pyrimidin-2-yl]piperidin-4-yl]oxy]-1H-pyrazolo[3,4-d]pyrimidine

832717-59-6P, 4-[[1-(2-Fluoro-4-propionylsulfamoylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester
 832717-60-9P, 4-[[1-(4-Cyano-2-fluorophenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832717-61-0P,
 1-(2,5-Difluoro-4-methoxyphenyl)-4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-1H-pyrazolo[3,4-d]pyrimidine 832717-62-1P,
 4-[[1-(2,5-Difluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832717-63-2P,
 4-[[1-(4-Fluoro-6-methoxypyridin-3-yl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832717-64-3P,
 4-[[1-(6-Methoxy-2-methylpyridin-3-yl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832717-65-4P,
 4-[[1-(2,5-Difluoro-4-sulfamoylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832717-66-5P,
 4-[[1-(2-Fluoro-4-hydroxyphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832717-67-6P,
 3-Fluoro-4-[4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]pyrazolo[3,4-d]pyrimidin-1-yl]-N-propionylbenzenesulfonamide
 832717-68-7P, 3-Fluoro-4-[4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]pyrazolo[3,4-d]pyrimidin-1-yl]benzonitrile
 832717-69-8P, 3-Fluoro-4-[4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]pyrazolo[3,4-d]pyrimidin-1-yl]benzenesulfonamide
 832717-70-1P, 1-(2,5-Difluoro-4-methylsulfonylphenyl)-4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-1H-pyrazolo[3,4-d]pyrimidine
 832717-71-2P, 1-(4-Fluoro-6-methoxypyridin-3-yl)-4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-1H-pyrazolo[3,4-d]pyrimidine
 832717-72-3P, 4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-1-(6-methoxy-2-methylpyridin-3-yl)-1H-pyrazolo[3,4-d]pyrimidine
 832717-73-4P, 2,5-Difluoro-4-[4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]pyrazolo[3,4-d]pyrimidin-1-yl]benzenesulfonamide
 832717-74-5P, 1-(2-Fluoro-4-methylsulfonylphenyl)-4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-1H-pyrazolo[3,4-d]pyrimidine
 832717-75-6P, 3-Fluoro-4-[4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrazolo[3,4-d]pyrimidin-1-yl]-N-propionylbenzenesulfonamide 832717-76-7P,
 3-Fluoro-4-[4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrazolo[3,4-d]pyrimidin-1-yl]benzonitrile
 832717-77-8P, 3-Fluoro-4-[4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrazolo[3,4-d]pyrimidin-1-yl]benzenesulfonamide
 832717-78-9P, 1-(2,5-Difluoro-4-methylsulfonylphenyl)-4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-1H-pyrazolo[3,4-d]pyrimidine
 832717-79-0P, 1-(4-Fluoro-6-methoxypyridin-3-yl)-4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-1H-pyrazolo[3,4-d]pyrimidine
 832717-80-3P, 4-[4-(3-Isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-1-(6-methoxy-2-methylpyridin-3-yl)-1H-pyrazolo[3,4-d]pyrimidine 832717-81-4P,
 2,5-Difluoro-4-[4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrazolo[3,4-d]pyrimidin-1-yl]benzenesulfonamide
 832717-82-5P, 4-[[1-(2-Fluoro-4-methoxyphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832717-83-6P,
 4-[[1-(4-Difluoromethoxy-2-fluorophenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832717-84-7P,
 4-[[1-(2-Fluoro-4-trifluoromethoxyphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832717-85-8P,
 4-[[1-(2,5-Difluoro-4-methoxyphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832717-86-9P,
 3-Fluoro-4-[4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]pyrazolo[3,4-d]pyrimidin-1-yl]phenol 832717-87-0P,
 1-(2-Fluoro-4-methoxyphenyl)-4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-1H-pyrazolo[3,4-d]pyrimidine 832717-88-1P,
 1-(4-Difluoromethoxy-2-fluorophenyl)-4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-1H-pyrazolo[3,4-d]pyrimidine 832717-89-2P,
 1-(2-Fluoro-4-trifluoromethoxyphenyl)-4-[[1-(3-isopropyl-[1,2,4]oxadiazol-

5-yl)piperidin-4-yl]oxy]-1H-pyrazolo[3,4-d]pyrimidine 832717-90-5P,
 1-(2,5-Difluoro-4-methoxyphenyl)-4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-1H-pyrazolo[3,4-d]pyrimidine 832717-91-6P,
 3-Fluoro-4-[4-(4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrazolo[3,4-d]pyrimidin-1-yl]phenol 832717-92-7P,
 1-(2-Fluoro-4-methoxyphenyl)-4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-1H-pyrazolo[3,4-d]pyrimidine 832717-93-8P,
 1-(4-Difluoromethoxy-2-fluorophenyl)-4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-1H-pyrazolo[3,4-d]pyrimidine 832717-94-9P,
 1-(2-Fluoro-4-trifluoromethoxyphenyl)-4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-1H-pyrazolo[3,4-d]pyrimidine 832717-95-0P,
 4-[[9-(2-Fluoro-4-propionylsulfamoylphenyl)-9H-purin-6-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832717-96-1P,
 4-[[9-(4-Cyano-2-fluorophenyl)-9H-purin-6-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832717-97-2P,
 4-[[9-(2-Fluoro-4-sulfamoylphenyl)-9H-purin-6-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832717-98-3P,
 9-(2-Fluoro-4-methylsulfonylphenyl)-6-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-9H-purine 832717-99-4P,
 3-Fluoro-4-[6-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]purin-9-yl]-N-propionylbenzenesulfonamide 832718-00-0P,
 3-Fluoro-4-[6-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]purin-9-yl]benzonitrile 832718-01-1P,
 3-Fluoro-4-[6-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]purin-9-yl]benzenesulfonamide 832718-02-2P,
 4-[[9-(2,5-Difluoro-4-methylsulfonylphenyl)-9H-purin-6-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-03-3P,
 4-[[9-(4-Fluoro-6-methoxypyridin-3-yl)-9H-purin-6-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-04-4P,
 4-[[9-(6-Methoxy-2-methylpyridin-3-yl)-9H-purin-6-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-05-5P,
 4-[[9-(2,5-Difluoro-4-sulfamoylphenyl)-9H-purin-6-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-06-6P,
 9-(2,5-Difluoro-4-methylsulfonylphenyl)-6-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-9H-purine 832718-07-7P,
 9-(4-Fluoro-6-methoxypyridin-3-yl)-6-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-9H-purine 832718-08-8P,
 6-[[1-(3-Isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-9-(6-methoxy-2-methylpyridin-3-yl)-9H-purine 832718-09-9P,
 2,5-Difluoro-4-[6-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]purin-9-yl]benzenesulfonamide 832718-10-2P,
 9-(2-Fluoro-4-methylsulfonylphenyl)-6-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-9H-purine 832718-11-3P,
 3-Fluoro-4-[6-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]purin-9-yl]-N-propionylbenzenesulfonamide 832718-12-4P,
 3-Fluoro-4-[6-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]purin-9-yl]benzonitrile 832718-13-5P,
 3-Fluoro-4-[6-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]purin-9-yl]benzenesulfonamide 832718-14-6P,
 9-(2,5-Difluoro-4-methylsulfonylphenyl)-6-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-9H-purine 832718-15-7P,
 9-(4-Fluoro-6-methoxypyridin-3-yl)-6-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-9H-purine 832718-16-8P,
 6-[4-(3-Isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-9-(6-methoxy-2-methylpyridin-3-yl)-9H-purine 832718-17-9P,
 2,5-Difluoro-4-[6-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]purin-9-yl]benzenesulfonamide 832718-18-0P,
 3-(2-Fluoro-4-methylsulfonylphenyl)-7-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-3H-[1,2,3]triazolo[4,5-d]pyrimidine 832718-19-1P,
 3-Fluoro-4-[7-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-[1,2,3]triazolo[4,5-d]pyrimidin-3-yl]-N-propionylbenzenesulfonamide 832718-20-4P,
 3-Fluoro-4-[7-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-[1,2,3]triazolo[4,5-d]pyrimidin-3-yl]benzonitrile

832718-21-5P, 3-Fluoro-4-[7-[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-[1,2,3]triazolo[4,5-d]pyrimidin-3-yl]benzenesulfonamide 832718-22-6P, 3-(2-Fluoro-4-methylsulfonylphenyl)-7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-3H-[1,2,3]triazolo[4,5-d]pyrimidine 832718-23-7P, 3-Fluoro-4-[7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-[1,2,3]triazolo[4,5-d]pyrimidin-3-yl]-N-propionylbenzenesulfonamide 832718-24-8P, 3-Fluoro-4-[7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-[1,2,3]triazolo[4,5-d]pyrimidin-3-yl]benzonitrile 832718-25-9P, 3-Fluoro-4-[7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-[1,2,3]triazolo[4,5-d]pyrimidin-3-yl]benzenesulfonamide 832718-26-0P, 3-(2,5-Difluoro-4-methylsulfonylphenyl)-7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-3H-[1,2,3]triazolo[4,5-d]pyrimidine 832718-27-1P, 3-(4-Fluoro-6-methoxy-pyridin-3-yl)-7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-3H-[1,2,3]triazolo[4,5-d]pyrimidine 832718-28-2P, 7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-3-(6-methoxy-2-methylpyridin-3-yl)-3H-[1,2,3]triazolo[4,5-d]pyrimidine 832718-29-3P, 2,5-Difluoro-4-[7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-[1,2,3]triazolo[4,5-d]pyrimidin-3-yl]benzenesulfonamide 832718-30-6P, 4-[13-(2-Fluoro-4-methylsulfonylphenyl)-3H-[1,2,3]triazolo[4,5-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-31-7P, 4-[13-(2-Fluoro-4-propionylsulfonylphenyl)-3H-[1,2,3]triazolo[4,5-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-32-8P, 4-[13-(4-Cyano-2-fluorophenyl)-3H-[1,2,3]triazolo[4,5-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-33-9P, 4-[13-(2-Fluoro-4-sulfamoylphenyl)-3H-[1,2,3]triazolo[4,5-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-34-0P, 4-[13-(2,5-Difluoro-4-methylsulfonylphenyl)-3H-[1,2,3]triazolo[4,5-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-35-1P, 4-[13-(4-Fluoro-6-methoxy-pyridin-3-yl)-3H-[1,2,3]triazolo[4,5-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-36-2P, 4-[13-(6-Methoxy-2-methylpyridin-3-yl)-3H-[1,2,3]triazolo[4,5-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-37-3P, 4-[13-(2,5-Difluoro-4-sulfamoylphenyl)-3H-[1,2,3]triazolo[4,5-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-38-4P, 3-(2,5-Difluoro-4-methylsulfonylphenyl)-7-[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-3H-[1,2,3]triazolo[4,5-d]pyrimidine 832718-39-5P, 3-(4-Fluoro-6-methoxy-pyridin-3-yl)-7-[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-3H-[1,2,3]triazolo[4,5-d]pyrimidine 832718-40-8P, 7-[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-3-(6-methoxy-2-methylpyridin-3-yl)-3H-[1,2,3]triazolo[4,5-d]pyrimidine 832718-41-9P, 2,5-Difluoro-4-[7-[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-[1,2,3]triazolo[4,5-d]pyrimidin-3-yl]benzenesulfonamide 832718-42-0P, 4-[18-(2-Fluoro-4-methylsulfonylphenyl)-[1,7]naphthyridin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-43-1P, 4-[18-(2-Fluoro-4-methylsulfonylphenyl)quinolin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-44-2P, 4-[18-(2-Fluoro-4-propionylsulfonylphenyl)quinolin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-45-3P, 4-[8-(4-Cyano-2-fluorophenyl)quinolin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-46-4P, 4-[8-(2-Fluoro-4-sulfamoylphenyl)quinolin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-47-5P, 4-[18-(2,5-Difluoro-4-methylsulfonylphenyl)quinolin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-48-6P, 4-[8-(4-Fluoro-6-methoxy-pyridin-3-yl)quinolin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-49-7P, 4-[8-(6-Methoxy-2-methylpyridin-3-yl)quinolin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-50-0P, 4-[8-(2,5-Difluoro-4-sulfamoylphenyl)quinolin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-51-1P,

2,5-Difluoro-4-[4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]quinolin-8-yl]benzenesulfonamide 832718-52-2P,
 4-[[1-(3-Isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-8-(6-methoxy-2-methylpyridin-3-yl)quinoline 832718-53-3P,
 8-(4-Fluoro-6-methoxypyridin-3-yl)-4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]quinoline 832718-54-4P,
 8-(2,5-Difluoro-4-methylsulfonylphenyl)-4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]quinoline 832718-55-5P,
 3-Fluoro-4-[4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]quinolin-8-yl]benzenesulfonamide 832718-56-6P,
 3-Fluoro-4-[4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]quinolin-8-yl]benzonitrile 832718-57-7P,
 3-Fluoro-4-[4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]quinolin-8-yl]-N-propionylbenzenesulfonamide 832718-58-8P,
 8-(2-Fluoro-4-methylsulfonylphenyl)-4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]quinoline 832718-59-9P,
 2,5-Difluoro-4-[4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]quinolin-8-yl]benzenesulfonamide 832718-60-2P,
 4-[4-(3-Isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-8-(6-methoxy-2-methylpyridin-3-yl)quinoline 832718-61-3P,
 8-(4-Fluoro-6-methoxypyridin-3-yl)-4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]quinoline 832718-62-4P,
 8-(2,5-Difluoro-4-methylsulfonylphenyl)-4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]quinoline 832718-63-5P,
 3-Fluoro-4-[4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]quinolin-8-yl]benzenesulfonamide 832718-65-7P,
 3-Fluoro-4-[4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]quinolin-8-yl]benzonitrile 832718-67-9P, 3-Fluoro-4-[4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]quinolin-8-yl]-N-propionylbenzenesulfonamide 832718-68-0P,
 8-(2-Fluoro-4-methylsulfonylphenyl)-4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]quinoline 832718-69-1P,
 4-[[8-(2-Fluoro-4-methylsulfonylphenyl)pyrido[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-70-4P,
 4-[[8-(2-Fluoro-4-propionylsulfamoylphenyl)pyrido[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-72-6P,
 4-[[8-(4-Cyano-2-fluorophenyl)pyrido[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-74-8P,
 4-[[8-(2-Fluoro-4-sulfamoylphenyl)pyrido[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-75-9P,
 4-[[8-(2,5-Difluoro-4-methylsulfonylphenyl)pyrido[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-76-0P,
 4-[[8-(4-Fluoro-6-methoxypyridin-3-yl)pyrido[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-77-1P,
 4-[[8-(6-Methoxy-2-methylpyridin-3-yl)pyrido[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-78-2P,
 4-[[8-(2,5-Difluoro-4-sulfamoylphenyl)pyrido[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832718-79-3P,
 8-(2-Fluoro-4-methylsulfonylphenyl)-4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]pyrido[3,4-d]pyrimidine 832718-80-6P,
 3-Fluoro-4-[4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]pyrido[3,4-d]pyrimidin-8-yl]-N-propionylbenzenesulfonamide 832718-81-7P, 3-Fluoro-4-[4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]pyrido[3,4-d]pyrimidin-8-yl]benzonitrile 832718-82-8P, 3-Fluoro-4-[4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]pyrido[3,4-d]pyrimidin-8-yl]benzenesulfonamide 832718-83-9P, 8-(2,5-Difluoro-4-methylsulfonylphenyl)-4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]pyrido[3,4-d]pyrimidine 832718-84-0P, 8-(4-Fluoro-6-methoxypyridin-3-yl)-4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]pyrido[3,4-d]pyrimidine 832718-85-1P, 4-[[1-(3-Isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-8-(6-methoxy-2-methylpyridin-3-yl)pyrido[3,4-d]pyrimidine 832718-86-2P,

2,5-Difluoro-4-[4-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]pyrido[3,4-d]pyrimidin-8-yl]benzenesulfonamide 832718-87-3P,
8-(2-Fluoro-4-methylsulfonylphenyl)-4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrido[3,4-d]pyrimidine 832718-88-4P,
3-Fluoro-4-[4-(4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrido[3,4-d]pyrimidin-8-yl]-N-propionylbenzenesulfonamide 832718-89-5P,
3-Fluoro-4-[4-(4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrido[3,4-d]pyrimidin-8-yl]benzonitrile 832718-90-8P,
3-Fluoro-4-[4-(4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrido[3,4-d]pyrimidin-8-yl]benzenesulfonamide
832718-91-9P, 3-(2,5-Difluoro-4-methylsulfonylphenyl)-4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrido[3,4-d]pyrimidine
832718-92-0P, 8-(4-Fluoro-6-methoxypyridin-3-yl)-4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrido[3,4-d]pyrimidine
832718-93-1P, 4-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-8-(6-methoxy-2-methylpyridin-3-yl)pyrido[3,4-d]pyrimidine 832718-94-2P,
2,5-Difluoro-4-[4-(4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrido[3,4-d]pyrimidin-8-yl]benzenesulfonamide
832718-95-3P, 3-(2-Fluoro-4-methylsulfonylphenyl)-7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrazolo[1,5-a]pyrimidine
832718-96-4P, 3-Fluoro-4-[7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrazolo[1,5-a]pyrimidin-3-yl]-N-propionylbenzenesulfonamide 832718-97-5P,
3-Fluoro-4-[7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrazolo[1,5-a]pyrimidin-3-yl]benzonitrile
832718-98-6P, 3-Fluoro-4-[7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrazolo[1,5-a]pyrimidin-3-yl]benzenesulfonamide
832718-99-7P, 3-(2,5-Difluoro-4-methylsulfonylphenyl)-7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrazolo[1,5-a]pyrimidine
832719-00-3P, 3-(4-Fluoro-6-methoxypyridin-3-yl)-7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrazolo[1,5-a]pyrimidine
832719-01-4P, 7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-3-(6-methoxy-2-methylpyridin-3-yl)pyrazolo[1,5-a]pyrimidine 832719-02-5P,
2,5-Difluoro-4-[7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]pyrazolo[1,5-a]pyrimidin-3-yl]benzenesulfonamide
832719-03-6P, 4-[[3-(2-Fluoro-4-methylsulfonylphenyl)pyrazolo[1,5-a]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester
832719-04-7P, 4-[[3-(2-Fluoro-4-propionylsulfamoylphenyl)pyrazolo[1,5-a]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester
832719-05-8P, 4-[[3-(4-Cyano-2-fluorophenyl)pyrazolo[1,5-a]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-06-9P,
4-[[3-(2-Fluoro-4-sulfamoylphenyl)pyrazolo[1,5-a]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-07-0P,
4-[[3-(2,5-Difluoro-4-methylsulfonylphenyl)pyrazolo[1,5-a]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-08-1P,
4-[[3-(4-Fluoro-6-methoxypyridin-3-yl)pyrazolo[1,5-a]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-09-2P,
4-[[3-(6-Methoxy-2-methylpyridin-3-yl)pyrazolo[1,5-a]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-10-5P,
4-[[3-(2,5-Difluoro-4-sulfamoylphenyl)pyrazolo[1,5-a]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-11-6P,
3-(2-Fluoro-4-methylsulfonylphenyl)-7-[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]pyrazolo[1,5-a]pyrimidine 832719-12-7P,
3-Fluoro-4-[7-[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]pyrazolo[1,5-a]pyrimidin-3-yl]-N-propionylbenzenesulfonamide
RL: SPN (Pharmacological activity); PAC (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of fused aryl and heteroaryl derivs., in particular pyrazolopyrimidines, as modulators of G-coupled protein receptor and their use in treatment of diabetes, hyperglycemia and

related diseases)

IT 832719-13-8P, 3-Fluoro-4-[7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]pyrazolo[1,5-a]pyrimidin-3-yl]benzonitrile
832719-14-9P, 3-Fluoro-4-[7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]pyrazolo[1,5-a]pyrimidin-3-yl]benzenesulfonamide
832719-15-0P, 3-(2,5-Difluoro-4-methylsulfonylphenyl)-7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]pyrazolo[1,5-a]pyrimidine
832719-16-1P, 3-(4-Fluoro-6-methoxy-pyridin-3-yl)-7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]pyrazolo[1,5-a]pyrimidine
832719-17-2P, 7-[[1-(3-Isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]-3-(6-methoxy-2-methylpyridin-3-yl)pyrazolo[1,5-a]pyrimidine
832719-18-3P, 2,5-Difluoro-4-[7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]pyrazolo[1,5-a]pyrimidin-3-yl]benzenesulfonamide
832719-19-4P, 4-[[3-(2-Fluoro-4-methylsulfonylphenyl)-2-methylpyrazolo[1,5-a]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester
832719-20-7P, 4-[[3-(2-Fluoro-4-propionylsulfamoylphenyl)-2-methylpyrazolo[1,5-a]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester
832719-21-8P, 4-[[3-(4-Cyano-2-fluorophenyl)-2-methylpyrazolo[1,5-a]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester
832719-22-9P, 4-[[3-(2-Fluoro-4-sulfamoylphenyl)-2-methylpyrazolo[1,5-a]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester
832719-23-0P, 4-[[3-(2,5-Difluoro-4-methylsulfonylphenyl)-2-methylpyrazolo[1,5-a]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester
832719-24-1P, 4-[[3-(4-Fluoro-6-methoxy-pyridin-3-yl)-2-methylpyrazolo[1,5-a]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester
832719-25-2P, 4-[[3-(6-Methoxy-2-methylpyridin-3-yl)-2-methylpyrazolo[1,5-a]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester
832719-26-3P, 4-[[3-(2,5-Difluoro-4-sulfamoylphenyl)-2-methylpyrazolo[1,5-a]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester
832719-27-4P, 2,5-Difluoro-4-[7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]-2-methylpyrazolo[1,5-a]pyrimidin-3-yl]benzenesulfonamide
832719-28-5P, 7-[[1-(3-Isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]-3-(6-methoxy-2-methylpyridin-3-yl)-2-methylpyrazolo[1,5-a]pyrimidine
832719-29-6P, 3-(4-Fluoro-6-methoxy-pyridin-3-yl)-7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]-2-methylpyrazolo[1,5-a]pyrimidine
832719-30-9P, 3-(2,5-Difluoro-4-methylsulfonylphenyl)-7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]-2-methylpyrazolo[1,5-a]pyrimidine
832719-31-0P, 3-Fluoro-4-[7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]-2-methylpyrazolo[1,5-a]pyrimidin-3-yl]benzenesulfonamide
832719-32-1P, 3-Fluoro-4-[7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]-2-methylpyrazolo[1,5-a]pyrimidin-3-yl]benzonitrile
832719-33-2P, 3-Fluoro-4-[7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]-2-methylpyrazolo[1,5-a]pyrimidin-3-yl]-N-propionylbenzenesulfonamide
832719-34-3P, 3-(2-Fluoro-4-methylsulfonylphenyl)-7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]-2-methylpyrazolo[1,5-a]pyrimidine
832719-35-4P, 3-(2-Fluoro-4-methylsulfonylphenyl)-7-[4-(3-isopropyl-1,2,4)oxadiazol-5-yl]cyclohexyloxy]-2-methylpyrazolo[1,5-a]pyrimidine
832719-36-5P, 3-Fluoro-4-[7-[4-(3-isopropyl-1,2,4)oxadiazol-5-yl]cyclohexyloxy]-2-methylpyrazolo[1,5-a]pyrimidin-3-yl]-N-propionylbenzenesulfonamide
832719-37-6P, 3-Fluoro-4-[7-[4-(3-isopropyl-1,2,4)oxadiazol-5-yl]cyclohexyloxy]-2-methylpyrazolo[1,5-a]pyrimidin-3-yl]benzonitrile
832719-38-7P, 3-Fluoro-4-[7-[4-(3-isopropyl-1,2,4)oxadiazol-5-yl]cyclohexyloxy]-2-methylpyrazolo[1,5-a]pyrimidin-3-yl]benzenesulfonamide
832719-39-8P, 3-(2,5-Difluoro-4-methylsulfonylphenyl)-7-[4-(3-isopropyl-1,2,4)oxadiazol-5-yl]cyclohexyloxy]-2-methylpyrazolo[1,5-a]pyrimidine
832719-40-1P, 4-(4-Fluoro-6-methoxy-pyridin-3-yl)-7-[4-(3-isopropyl-1,2,4)oxadiazol-5-yl]cyclohexyloxy]-2-methylpyrazolo[1,5-a]pyrimidine
832719-41-2P, 7-[4-(3-Isopropyl-1,2,4)oxadiazol-5-yl]cyclohexyloxy]-3-(6-methoxy-2-methylpyridin-3-yl)-2-methylpyrazolo[1,5-a]pyrimidine
832719-42-3P,

2,5-Difluoro-4-[7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-2-methylpyrazolo[1,5-a]pyrimidin-3-yl]benzenesulfonamide 832719-43-4P, 4-[[3-(2-Fluoro-4-methylsulfonylphenyl)-1-methyl-1H-pyrazolo[4,3-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-44-5P, 4-[[3-(2-Fluoro-4-propionylsulfamoylphenyl)-1-methyl-1H-pyrazolo[4,3-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-45-6P, 4-[[3-(4-Cyano-2-fluorophenyl)-1-methyl-1H-pyrazolo[4,3-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-46-7P, 4-[[3-(2-Fluoro-4-sulfamoylphenyl)-1-methyl-1H-pyrazolo[4,3-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-47-8P, 4-[[3-(2,5-Difluoro-4-methylsulfonylphenyl)-1-methyl-1H-pyrazolo[4,3-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-49-0P, 4-[[3-(4-Fluoro-6-methoxypyridin-3-yl)-1-methyl-1H-pyrazolo[4,3-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-50-3P, 4-[[3-(6-Methoxy-2-methylpyridin-3-yl)-1-methyl-1H-pyrazolo[4,3-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-52-5P, 4-[[3-(2,5-Difluoro-4-sulfamoylphenyl)-1-methyl-1H-pyrazolo[4,3-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-54-7P, 3-(2-Fluoro-4-methylsulfonylphenyl)-7-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-1-methyl-1H-pyrazolo[4,3-d]pyrimidine 832719-55-8P, 3-Fluoro-4-[7-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-1-methyl-1H-pyrazolo[4,3-d]pyrimidin-3-yl]benzonitrile 832719-56-9P, 3-Fluoro-4-[7-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-1-methyl-1H-pyrazolo[4,3-d]pyrimidin-3-yl]benzonitrile 832719-57-0P, 3-Fluoro-4-[7-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-1-methyl-1H-pyrazolo[4,3-d]pyrimidin-3-yl]benzenesulfonamide 832719-58-1P, 3-(2,5-Difluoro-4-methylsulfonylphenyl)-7-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-1-methyl-1H-pyrazolo[4,3-d]pyrimidine 832719-59-2P, 3-(4-Fluoro-6-methoxypyridin-3-yl)-7-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-1-methyl-1H-pyrazolo[4,3-d]pyrimidine 832719-60-5P, 7-[[1-(3-Isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-3-(6-methoxy-2-methylpyridin-3-yl)-1-methyl-1H-pyrazolo[4,3-d]pyrimidine 832719-61-6P, 2,5-Difluoro-4-[7-[[1-(3-isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-yl]oxy]-1-methyl-1H-pyrazolo[4,3-d]pyrimidin-3-yl]benzenesulfonamide 832719-62-7P, 3-(2-Fluoro-4-methylsulfonylphenyl)-7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-1-methyl-1H-pyrazolo[4,3-d]pyrimidine 832719-63-8P, 3-Fluoro-4-[7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-1-methyl-1H-pyrazolo[4,3-d]pyrimidin-3-yl]-N-propionylbenzenesulfonamide 832719-64-9P, 3-Fluoro-4-[7-[4-(3-isopropyl-[9,2,4]oxadiazol-5-yl)cyclohexyloxy]-1-methyl-1H-pyrazolo[4,3-d]pyrimidin-3-yl]benzonitrile 832719-65-0P, 3-Fluoro-4-[7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-1-methyl-1H-pyrazolo[4,3-d]pyrimidin-3-yl]benzenesulfonamide 832719-66-1P, 3-(2,5-Difluoro-4-methylsulfonylphenyl)-7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-1-methyl-1H-pyrazolo[4,3-d]pyrimidine 832719-67-2P, 3-(4-Fluoro-6-methoxypyridin-3-yl)-7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-1-methyl-1H-pyrazolo[4,3-d]pyrimidine 832719-68-3P, 7-[4-(3-Isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-3-(6-methoxy-2-methylpyridin-3-yl)-1-methyl-1H-pyrazolo[4,3-d]pyrimidine 832719-69-4P, 2,5-Difluoro-4-[7-[4-(3-isopropyl-[1,2,4]oxadiazol-5-yl)cyclohexyloxy]-1-methyl-1H-pyrazolo[4,3-d]pyrimidin-3-yl]benzenesulfonamide 832719-70-7P, 4-[[3-(2-Fluoro-4-methylsulfonylphenyl)-2-methyl-2H-pyrazolo[4,3-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-71-8P, 4-[[3-(2-Fluoro-4-propionylsulfamoylphenyl)-2-methyl-2H-pyrazolo[4,3-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-72-9P, 4-[[3-(4-Cyano-2-fluorophenyl)-2-methyl-2H-pyrazolo[4,3-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-73-0P, 4-[[3-(2-Fluoro-4-sulfamoylphenyl)-2-methyl-2H-

pyrazolo[4,3-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-74-1P, 4-[[3-(2,5-Difluoro-4-methylsulfonylphenyl)-2-methyl-2H-pyrazolo[4,3-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-75-2P, 4-[[3-(4-Fluoro-6-methoxypyridin-3-yl)-2-methyl-2H-pyrazolo[4,3-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-76-3P, 4-[[3-(6-Methoxy-2-methylpyridin-3-yl)-2-methyl-2H-pyrazolo[4,3-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-77-4P, 4-[[3-(2,5-Difluoro-4-sulfamoylphenyl)-2-methyl-2H-pyrazolo[4,3-d]pyrimidin-7-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832719-78-5P, 3-(2-Fluoro-4-methylsulfonylphenyl)-7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]-2-methyl-2H-pyrazolo[4,3-d]pyrimidine 832719-79-6P, 3-Fluoro-4-[7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]-2-methyl-2H-pyrazolo[4,3-d]pyrimidine 832719-80-9P, 3-Fluoro-4-[7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]-2-methyl-2H-pyrazolo[4,3-d]pyrimidin-3-yl]benzenesulfonamide 832719-81-0P, 3-Fluoro-4-[7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]-2-methyl-2H-pyrazolo[4,3-d]pyrimidin-3-yl]benzenesulfonamide 832719-82-1P, 3-(2,5-Difluoro-4-methylsulfonylphenyl)-7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]-2-methyl-2H-pyrazolo[4,3-d]pyrimidine 832719-83-2P, 3-(4-Fluoro-6-methoxypyridin-3-yl)-7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]-2-methyl-2H-pyrazolo[4,3-d]pyrimidine 832719-84-3P, 7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]-3-(6-methoxy-2-methylpyridin-3-yl)-2-methyl-2H-pyrazolo[4,3-d]pyrimidine 832719-85-4P, 2,5-Difluoro-4-[7-[[1-(3-isopropyl-1,2,4)oxadiazol-5-yl]piperidin-4-yl]oxy]-2-methyl-2H-pyrazolo[4,3-d]pyrimidin-3-yl]benzenesulfonamide 832719-86-5P, 3-(2-Fluoro-4-methylsulfonylphenyl)-7-[4-(3-isopropyl-1,2,4)oxadiazol-5-yl]cyclohexyloxy]-2-methyl-2H-pyrazolo[4,3-d]pyrimidine 832719-87-6P, 3-Fluoro-4-[7-[[4-(3-isopropyl-1,2,4)oxadiazol-5-yl]cyclohexyloxy]oxy]-2-methyl-2H-pyrazolo[4,3-d]pyrimidin-3-yl]-N-propionylbenzenesulfonamide 832719-88-7P, 3-Fluoro-4-[7-[4-(3-isopropyl-1,2,4)oxadiazol-5-yl]cyclohexyloxy]-2-methyl-2H-pyrazolo[4,3-d]pyrimidin-3-yl]benzonitrile 832719-89-8P, 3-Fluoro-4-[7-[4-(3-isopropyl-1,2,4)oxadiazol-5-yl]cyclohexyloxy]-2-methyl-2H-pyrazolo[4,3-d]pyrimidin-3-yl]benzenesulfonamide 832719-90-1P, 3-(2,5-Difluoro-4-methylsulfonylphenyl)-7-[4-(3-isopropyl-1,2,4)oxadiazol-5-yl]cyclohexyloxy]-2-methyl-2H-pyrazolo[4,3-d]pyrimidine 832719-91-2P, 3-(4-Fluoro-6-methoxypyridin-3-yl)-7-[4-(3-isopropyl-1,2,4)oxadiazol-5-yl]cyclohexyloxy]-2-methyl-2H-pyrazolo[4,3-d]pyrimidine 832719-92-3P, 7-[4-(3-isopropyl-1,2,4)oxadiazol-5-yl]cyclohexyloxy]-3-(6-methoxy-2-methylpyridin-3-yl)-2-methyl-2H-pyrazolo[4,3-d]pyrimidine 832719-93-4P 832721-29-6P 832721-30-9P 832721-31-0P 832721-32-1P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of fused aryl and heteroaryl derivs., in particular pyrazolopyrimidines, as modulators of G-coupled protein receptor and their use in treatment of diabetes, hyperglycemia and related diseases)

IT 35613-84-4P, N-Hydroxyisobutyramidine 49713-38-4P, 2-[(2-Iodophenylamino)methylene]malonic acid diethyl ester 49713-55-5P, 4-Chloro-8-iodoquinoline 51075-37-7P, 1-Cyano-4-hydroxypiperidine 56029-45-9P, 6-tert-Butylnicotinonitrile 106368-32-5P, 5-Amino-1-(4-methylsulfonylphenyl)-1H-pyrazole-4-carbonitrile 138022-02-3P, 4-[(Methylamino)methyl]piperidine-1-carboxylic acid tert-butyl ester 149806-52-0P, 5'-Bromo-3,4,5,6-tetrahydro-2H-[1,2']bipyridinyl-4-ol 155456-32-9P, 4-[(Acetylaminomethyl)piperidine-1-carboxylic acid tert-butyl ester 205597-70-2P, 8-Iodo-4-oxo-1,4-dihydroquinoline-3-carboxylic acid ethyl

ester 329776-71-8P, 4-Methylsulfonylbenzoic acid phenyl ester 606126-17-4P, 3-Fluoro-4-hydrazinobenzenesulfonamide 614745-80-1P, 4-[(Ethylamino)methyl]piperidine-1-carboxylic acid tert-butyl ester 681508-69-0P, 4-Hydroxy-1-(4-trifluoromethoxyphenyl)piperidine 832714-07-5P, 1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-ol 832714-08-6P, 4-Chloro-1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidine 832714-10-0P, 5-Amino-1-(4-methylsulfonylphenyl)-3-methyl-1H-pyrazole-4-carbonitrile 832714-11-1P, 1-(4-Methylsulfonylphenyl)-3-methyl-1H-pyrazolo[3,4-d]pyrimidin-4-ol 832714-12-2P, 4-Chloro-1-(4-methylsulfonylphenyl)-3-methyl-1H-pyrazolo[3,4-d]pyrimidine 832714-14-4P, N-[4-Cyano-2-(4-methylsulfonylphenyl)-5-methyl-2H-pyrazol-3-yl]acetamide 832714-15-5P, 1-(4-Methylsulfonylphenyl)-3,6-dimethyl-1,5-dihydropyrazolo[3,4-d]pyrimidin-4-one 832714-16-6P, 4-Chloro-1-(4-methylsulfonylphenyl)-3,6-dimethyl-1H-pyrazolo[3,4-d]pyrimidine 832714-37-1P, 1-(3-Isopropyl-[1,2,4]oxadiazol-5-yl)piperidin-4-ol 832714-38-2P, 4-Chloro-1-(2-fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidine 832714-47-3P, 5-Amino-1-(2-fluoro-4-methylsulfonylphenyl)-1H-pyrazole-4-carbonitrile 832714-49-5P, 1-(2-Fluoro-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-ol 832714-56-4P, 5-Isopropoxymethylpyridine-2-carbonitrile 832714-58-6P, 5-Isopropoxymethylpyridine-2-carboxylic acid 832714-60-0P, 5-Isopropoxypyridine-2-carboxylic acid 832715-03-4P, 5'-Trifluoromethyl-3,4,5,6-tetrahydro-2H-[1,2']bipyridinyl-4-ol 832715-05-6P, 3-Hydroxy-1-[(3-isopropyl-1,2,4-oxadiazol-5-yl)methyl]pyrrolidine 832715-89-6P, [1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl] (piperidin-4-yl)amine 832715-92-1P, [1-(4-Methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl] (piperidin-3-yl)amine 832715-99-8P, 6-tert-Butylnicotinic acid 832716-06-0P, 1-[2-(2-Dimethylaminoethoxy)-4-methylsulfonylphenyl]-1H-pyrazolo[3,4-d]pyrimidin-4-ol 832716-07-1P, [2-[2-(4-Chloropyrazolo[3,4-d]pyrimidin-1-yl)-5-methylsulfonylphenoxy]ethyl]dimethylamine 832716-09-3P, 4-(2-Dimethylaminoethylcarbamoyl)piperidine-1-carboxylic acid tert-butyl ester 832716-10-6P, 4-[(2-Dimethylaminoethylamino)methyl]piperidine-1-carboxylic acid tert-butyl ester 832716-55-9P 832716-56-0P, [4-Chloro-1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-6-yl]dimethylamine 832716-59-3P, 1-(2-Dimethylamino-4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-ol 832716-71-9P, 4-(Azetidin-3-yloxy)-1-(4-methylsulfonylphenyl)-1H-pyrazolo[3,4-d]pyrimidine 832716-91-3P, 1-(2-Fluoro-4-methylsulfonylphenyl)-4-[(piperidin-4-yl)sulfanyl]-1H-pyrazolo[3,4-d]pyrimidine 832717-15-4P, 4-[[5-Amino-6-[(4-methylsulfonylphenyl)amino]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid tert-butyl ester 832717-21-2P, 7-Chloro-3-(4-methylsulfonylphenyl)-3H-[1,2,3]triazolo[4,5-d]pyrimidine 832717-23-4P, 1-(4-Methylsulfonylphenyl)-2-nitroethanone 832717-24-5P, 1-(4-Methylsulfonylphenyl)-2-nitroethanone oxime 832717-25-6P, 3-(4-Methylsulfonylphenyl)-4-nitroisoxazole-5-carboxylic acid ethyl ester 832717-26-7P, 4-Amino-3-(4-methylsulfonylphenyl)isoxazole-5-carboxylic acid ethyl ester 832717-27-8P, 4-Amino-3-(4-methylsulfonylphenyl)isoxazole-5-carboxamide 832717-28-9P, 3-(4-Methylsulfonylphenyl)isoxazolo[4,5-d]pyrimidin-7-ol 832717-29-0P, 7-Chloro-3-(4-methylsulfonylphenyl)isoxazolo[4,5-d]pyrimidine 832717-34-7P, 8-Iodo-4-oxo-1,4-dihydroquinoline-3-carboxylic acid 832717-35-8P, 8-Iodo-1H-quinolin-4-one 832717-36-9P, 8-(4-Bromo-2-fluorophenyl)-4-chloroquinoline 832717-38-1P, 4-(8-Chloroquinolin-4-yloxy)piperidine-1-carboxylic acid isopropyl ester RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; preparation of fused aryl and heteroaryl derivs., in particular pyrazolopyrimidines, as modulators of G-coupled protein receptor and their use in treatment of diabetes, hyperglycemia and

related diseases)

IT 71-41-0, n-Pentanol, reactions 78-82-0, Isobutyronitrile 87-13-8
96-99-1 97-95-0, 2-Ethylbutan-1-ol 100-54-9, 3-Cyanopyridine
108-00-9, N,N-Dimethyl-1,2-ethylenediamine 108-01-0, 2-(
Dimethylamino)ethanol 108-23-6, Isopropyl
chloroformate 109-04-6, 2-Bromopyridine 121-34-6 123-06-8 402-66-4
407-14-7, 4-(Trifluoromethoxy)bromobenzene 499-05-8 499-81-0,
3,5-Pyridinedicarboxylic acid 503-74-2 535-89-7,
(2-Chloro-6-methylpyrimidin-4-yl)dimethylamine 536-38-9 536-69-6,
5-Butylpyridine-2-carboxylic acid 543-27-1, Isobutyl chloroformate
584-02-1, 3-Pentanol 585-70-6, 5-Bromofuran-2-carboxylic acid
592-34-7, n-Butyl chloroformate 615-43-0, 2-Iodoaniline 642-91-1,
2,1-Benzisoxazole-3-carboxylic acid 816-40-0, Bromomethyl ethyl ketone
1072-84-0, 1H-Imidazole-5-carboxylic acid 1219-33-6 1462-86-8,
3-Aminopicolinic acid 2003-10-3 2516-33-8, Cyclopropylmethanol
2566-44-1, 2-Cyclopropylethanol 2632-10-2 3222-47-7 3222-49-9
3222-56-8 3405-77-4 3637-61-4, Cyclopentylmethanol 4021-13-0,
4-Ethylpyridine-2-carboxylic acid 4052-30-6, 4-Methylsulfonylbenzoic
acid 4415-82-1, Cyclobutylmethanol 4755-77-5, 1-(Chlorocarbonyl)
formic acid ethyl ester 4795-29-3 4837-20-1,
4-Difluoromethoxybenzoic acid 5326-23-8, 6-Chloronicotinic acid
5382-16-1, 4-Hydroxypiperidine 5417-82-3,
1-Ethoxyethylidenemalononitrile 5469-26-1 6221-12-1 6313-54-8
6973-60-0 10531-41-6 16331-46-7, 4-Ethoxybenzoyl chloride
17852-67-4, 4-(Methylsulfonyl)phenylhydrazine hydrochloride 17874-76-9
20260-53-1, Nicotinoyl chloride hydrochloride 20412-38-8, Neopentyl
chloroformate 20826-04-4 21617-12-9, 4,8-Dichloroquinoline
22620-27-5 26095-36-3, 5-[(Morpholin-4-yl)methyl]furan-2-carboxylic acid
36823-88-8, 4-Trifluoromethoxybenzoyl chloride 40499-83-0,
3-Hydroxypyrrolidine 41667-95-2 50488-42-1,
2-Bromo-5-trifluoromethylpyridine 52334-81-3,
5-Trifluoromethyl-2-chloropyridine 53939-30-3, 5-Bromo-2-chloropyridine
54042-97-6, 5-Chloromethyl-3-isopropyl-[1,2,4]oxadiazole 60965-26-6
84358-13-4, 1-tert-Butoxycarbonylisonipecotic acid 98546-51-1,
(4-Methylthiophenyl)boronic acid 103057-44-9,
3-Hydroxypyrrolidine-1-carboxylic acid tert-butyl ester 103962-10-3,
2-Bromo-1-(4-trifluoromethoxyphenyl)ethanol 108966-71-8,
3,4-Difluorobenzenesulfonamide 109384-19-2,
4-Hydroxypiperidine-1-carboxylic acid tert-butyl ester 111196-81-7,
2-Chloro-5-ethylpyrimidine 113100-53-1 134464-79-2,
4-Mercaptopyridine-1-carboxylic acid tert-butyl ester 141134-24-9
142222-22-0, 4-Aminomethylpiperidine-1-carboxylic acid tert-butyl ester
153624-46-5, 4-Isopropoxyphenylboronic acid 175205-81-9,
2-Bromo-4-trifluoromethylpyridine 177759-44-3 195314-59-1,
(4-Aminocyclohexyl)carbamic acid tert-butyl ester 205178-80-9
207986-25-2 210963-95-4 223382-13-6, 1-Benzylazetidin-3-ol
hydrochloride 231291-22-8 253315-22-9 479065-30-0,
1-(2-Methylsulfonyl)ethylpiperazine 733751-06-9,
(6-Chloro-5-nitropyrimidin-4-yl) (4-methylsulfonylphenyl)amine
832714-22-4, 1-(4-Methylsulfonylphenyl)-4-[(piperidin-4-yl)oxy]-1H-
pyrazolo[3,4-d]pyrimidine hydrochloride 832714-24-6,
1-(2-Fluoro-4-methylsulfonylphenyl)-4-[(piperidin-4-yl)sulfonyl]-1H-
pyrazolo[3,4-d]pyrimidine hydrochloride 832714-35-9,
1-(2-Fluoro-4-methylsulfonylphenyl)-4-[(piperidin-4-yl)oxy]-1H-
pyrazolo[3,4-d]pyrimidine hydrochloride 832714-48-4,
(2-Fluoro-4-methylsulfonylphenyl)hydrazine 832714-57-5,
2-Chloro-5-(isopropoxymethyl)pyridine 832714-62-2,
5'-Isopropoxy-3,4,5,6-tetrahydro-2H-[1,2']bipyridinyl-4-ol 832714-73-5
832715-51-2, 4-Hydroxypiperidine-1-carboxylic acid isopropyl ester
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832715-57-8, 4-[[1-(2-Fluoro-4-iodophenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-
yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832715-60-3,

4-[[1-(4-Iodo-2-methylphenyl)-1H-pyrazolo[3,4-d]pyrimidin-4-yl]oxy]piperidine-1-carboxylic acid isopropyl ester 832715-86-3,
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 832717-00-7 832717-04-1, 1-[(3-Isopropyl-[1,2,4]oxadiazol-5-yl)methyl]pyrrolidin-3-ylamine 832717-08-5,
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 887579-62-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of fused aryl and heteroaryl derivs., in particular pyrazolopyrimidines, as modulators of G-coupled protein receptor and their use in treatment of diabetes, hyperglycemia and related diseases)

IT 9004-10-8, Insulin, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(resistance; preparation of fused aryl and heteroaryl derivs., in particular pyrazolopyrimidines, as modulators of G-coupled protein receptor and their use in treatment of diabetes, hyperglycemia and related diseases)

IT 50-99-7, D-Glucose, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(tolerance; preparation of fused aryl and heteroaryl derivs., in particular pyrazolopyrimidines, as modulators of G-coupled protein receptor and their use in treatment of diabetes, hyperglycemia and related diseases)

IT 833495-62-8 833495-64-0 833495-65-1 833495-66-2 833495-67-3

RL: PRP (Properties)

(unclaimed nucleotide sequence; preparation of fused aryl and heteroaryl derivs., in particular pyrazolo[3,4-d]pyrimidines, as modulators of G-coupled protein receptor and their use in the prophylaxis and treatment of metabolic disorders)

IT 833495-63-9

RL: PRP (Properties)

(unclaimed protein sequence; preparation of fused aryl and heteroaryl derivs., in particular pyrazolo[3,4-d]pyrimidines, as modulators of G-coupled protein receptor and their use in the prophylaxis and treatment of metabolic disorders)

IT 754986-47-5

RL: PRP (Properties)

(unclaimed sequence; preparation of fused aryl and heteroaryl derivs., in particular pyrazolo[3,4-d]pyrimidines, as modulators of G-coupled protein receptor and their use in the prophylaxis and treatment of metabolic disorders)

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L9 ANSWER 19 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:467862 CAPLUS

DN 141:38441

ED Entered STN: 10 Jun 2004

TI Preparation of N-(carbamimidoylbenzyl)benzeneacetamides and pyridineacetamides as inhibitors of the formation of coagulation factors Xa, IXa, and thrombin induced by factor VIIa and tissue factor

IN Banner, David William; Gobbi, Luca Claudio; Groebke, Zbinden Katrin; Obst, Ulrike; Stahl, Christoph Martin

PA F. Hoffmann-La Roche A.-G., Switz.

SO PCT Int. Appl., 183 pp.

CODEN: P1XXD2

DT Patent

LA English

IC ICM C07D213-00

CC 25-19 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

Section cross-reference(s): 1, 63

FAN.CNT 1

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PI	WO 2004048335	A2	20040610	WO 2003-EP13087	20031121
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	CN 1714079	A	20051228	CN 2003-80103550	20031121
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	NO 2005002311	A	20050616	NO 2005-2311	20050511
	MX 2005005446	A	20050826	MX 2005-5446	20050520
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PRAI	EP 2002-26365	A	20021125		

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CLASS	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES

WO 2004048335	ICM		C07D213-00
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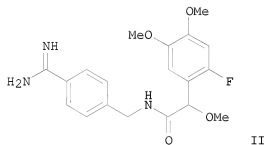
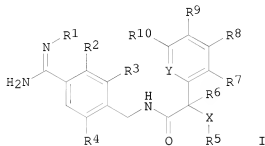
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	IPCR	C07D0211-00 [I,C*]; C07D0211-46 [I,A]; C07D0213-00 [I,C*]; C07D0213-30 [I,A]; C07D0213-38 [I,A]; C07D0213-56 [I,A]; C07D0213-65 [I,A]; C07D0213-73 [I,A]; C07D0239-00 [I,C*]; C07D0239-42 [I,A]; C07D0265-00 [I,C*]; C07D0265-36 [I,A]; C07D0271-00 [I,C*]; C07D0271-06 [I,A]; C07D0295-00 [I,C*]; C07D0295-15 [I,A]; C07D0309-00 [I,C*]; C07D0309-12 [I,A]; C07D0311-00 [I,C*]; C07D0311-04 [I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A]
	ECLA	C07D211/46; C07D213/30C; C07D213/38; C07D213/56; C07D213/65; C07D213/73D; C07D239/42B3; C07D265/36; C07D271/06B; C07D295/14B1F2; C07D309/12; C07D311/04; C07D521/00B2E; M07D; M07D; M07D; M07D; M07D; M07D
CN 1714079	IPCI	C07D0213-56 [ICM,7]; C07D0213-65 [ICS,7]; C07D0213-30 [ICS,7]; C07D0271-06 [ICS,7]; C07D0271-00 [ICS,7,C*]; C07D0239-42 [ICS,7]; C07D0239-00 [ICS,7,C*]; C07D0213-38 [ICS,7]; C07D0213-73 [ICS,7]; C07D0213-00 [ICS,7,C*]; C07C0257-18 [ICS,7]; C07C0257-00 [ICS,7,C*]; C07C0259-18 [ICS,7]; C07C0259-00 [ICS,7,C*]
	IPCR	C07D0211-00 [I,C*]; C07D0211-46 [I,A]; C07D0213-00 [I,C*]; C07D0213-30 [I,A]; C07D0213-38 [I,A]; C07D0213-56 [I,A]; C07D0213-65 [I,A]; C07D0213-73 [I,A]; C07D0239-00 [I,C*]; C07D0239-42 [I,A]; C07D0265-00 [I,C*]; C07D0265-36 [I,A]; C07D0271-00 [I,C*]; C07D0271-06 [I,A]; C07D0295-00 [I,C*]; C07D0295-15 [I,A]; C07D0309-00 [I,C*]; C07D0309-12 [I,A]; C07D0311-00 [I,C*]; C07D0311-04 [I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A]
	ECLA	C07D211/46; C07D213/30C; C07D213/38; C07D213/56; C07D213/65; C07D213/73D; C07D239/42B3; C07D265/36; C07D271/06B; C07D295/14B1F2; C07D309/12; C07D311/04; C07D521/00B2E; M07D; M07D; M07D; M07D; M07D; M07D
JP 2006515284	IPCI	C07C0257-18 [I,A]; C07C0257-00 [I,C*]; C07D0317-54 [I,A]; C07D0317-00 [I,C*]; C07D0211-46 [I,A]; C07D0309-12 [I,A]; C07D0309-00 [I,C*]; C07D0319-20 [I,A]; C07D0319-00 [I,C*]; C07D0295-14 [I,A]; C07D0233-18 [I,A]; C07D0233-00 [I,C*]; C07D0311-58 [I,A]; C07D0311-00 [I,C*]; C07D0213-56 [I,A]; C07D0211-96 [I,A]; C07D0213-65 [I,A]; C07D0213-73 [I,A]; C07D0271-06 [I,A]; C07D0271-00 [I,C*]; C07D0235-12 [I,A]; C07D0235-00 [I,C*]; C07D0213-30 [I,A]; C07D0295-08 [I,A]; C07D0333-16 [I,A]; C07D0333-00 [I,C*]; C07D0307-42 [I,A]; C07D0211-22 [I,A]; C07D0211-00 [I,C*]; C07D0213-04 [I,A]; C07D0239-26 [I,A]; C07D0239-00 [I,C*]; C07D0295-18 [I,A]; C07D0295-00 [I,C*]; C07D0209-18 [I,A]; C07D0209-00 [I,C*]; C07D0307-16 [I,A]; C07D0307-00 [I,C*]; C07D0213-89 [I,A]; C07D0213-00 [I,C*]; A61K0031-165 [I,A]; A61K0031-36 [I,A]; A61K0031-445 [I,A]; A61K0031-216 [I,A]; A61K0031-192 [I,A]; A61K0031-185 [I,C*]; A61K0031-351 [I,A]; A61K0031-357 [I,A]; A61K0031-40 [I,A]; A61K0031-4172 [I,A]; A61K0031-5375 [I,A]; A61K0031-353 [I,A]; A61K0031-352 [I,C*]; A61K0031-69 [I,A]; A61K0031-4418 [I,A]; A61K0031-4402 [I,A]; A61K0031-4406 [I,A]; A61K0031-44 [I,A]; A61K0031-4245 [I,A]; A61K0031-4184 [I,A]; A61K0031-4164 [I,C*]; A61K0031-381 [I,A]; A61K0031-341 [I,A]; A61K0031-505 [I,A]; A61K0031-404 [I,A];

		A61K0031-403 [I,C*]; A61K0031-27 [I,A]; A61K0031-21 [I,C*]; A61K0031-4425 [I,A]; A61P0043-00 [I,A]; A61P0007-02 [I,A]; A61P0007-00 [I,C*]; A61P0011-00 [I,A]; A61P0009-04 [I,A]; A61P0009-10 [I,A]; A61P0009-00 [I,C*]; A61P0029-00 [I,A]; A61P0035-00 [I,A]; C07C0271-64 [I,A]; C07C0271-00 [I,C*]; C07C0259-18 [I,A]; C07C0259-00 [I,C*]; C07C0323-56 [I,A]; C07C0319-20 [I,A]; C07C0319-00 [I,C*]; C07C0317-44 [I,A]; C07C0317-00 [I,C*]; C07C0315-04 [I,A]; C07C0315-00 [I,C*]; C07C0255-60 [I,A]; C07C0255-00 [I,C*]; C07C0323-62 [I,A]; C07C0323-00 [I,C*]
FTERM		4C022/BA02; 4C022/LA02; 4C023/BA05; 4C037/CA17; 4C037/HA08; 4C054/AA02; 4C054/BB10; 4C054/CC02; 4C054/CC04; 4C054/CC08; 4C054/DD01; 4C054/EE01; 4C054/EE12; 4C054/FF01; 4C054/FF25; 4C055/AA01; 4C055/AA17; 4C055/BA01; 4C055/BA02; 4C055/BA03; 4C055/BA06; 4C055/BA08; 4C055/BA13; 4C055/BA16; 4C055/BA34; 4C055/BA42; 4C055/BA52; 4C055/BB01; 4C055/BB02; 4C055/BB04; 4C055/BB08; 4C055/BB10; 4C055/BB11; 4C055/CA01; 4C055/CA02; 4C055/CA06; 4C055/CA08; 4C055/CA13; 4C055/CA16; 4C055/CA34; 4C055/CA42; 4C055/CA51; 4C055/CA52; 4C055/CB01; 4C055/CB02; 4C055/CB04; 4C055/CB07; 4C055/CB08; 4C055/CB10; 4C055/CB11; 4C055/DA01; 4C055/DA06; 4C055/DA08; 4C055/DA13; 4C055/DA16; 4C055/DA17; 4C055/DA34; 4C055/DB01; 4C055/DB02; 4C055/DB04; 4C055/DB07; 4C055/DB08; 4C055/DB10; 4C055/DB11; 4C056/AA01; 4C056/AB02; 4C056/AC05; 4C056/AD01; 4C056/AE03; 4C056/FA08; 4C056/FB01; 4C056/FC01; 4C062/AA22; 4C062/FF13; 4C086/AA01; 4C086/AA02; 4C086/AA03; 4C086/BA03; 4C086/BA07; 4C086/BA08; 4C086/BA13; 4C086/BA15; 4C086/BB02; 4C086/BC07; 4C086/BC13; 4C086/BC17; 4C086/BC21; 4C086/BC38; 4C086/BC39; 4C086/BC42; 4C086/BC71; 4C086/BC73; 4C086/MA01; 4C086/MA04; 4C086/NA14; 4C086/ZA36; 4C086/ZA39; 4C086/ZA45; 4C086/ZA54; 4C086/ZA59; 4C086/ZB11; 4C086/ZB26; 4C086/ZC02; 4C204/BB01; 4C204/CB03; 4C204/DB01; 4C204/EB01; 4C204/FB01; 4C204/GB18; 4C206/AA01; 4C206/AA02; 4C206/AA03; 4C206/HA10; 4C206/JA19; 4C206/MA01; 4C206/MA04; 4C206/MA13; 4C206/MA14; 4C206/NA14; 4C206/ZA36; 4C206/ZA39; 4C206/ZA45; 4C206/ZA54; 4C206/ZA59; 4C206/ZB11; 4C206/ZB26; 4C206/ZC02; 4H006/AA01; 4H006/AB23; 4H006/AB28; 4H006/AC59; 4H006/RA06; 4H006/TA04; 4H006/TB53; 4H006/TB59; 4H006/TN30; 4H006/TN50; 4H006/TN60
AT 384696	IPCI	C07D0213-00 [I,C]; C07D0213-56 [I,A]; C07C0257-00 [I,C]; C07C0257-18 [I,A]; C07D0213-30 [I,A]; C07D0213-38 [I,A]; C07D0213-65 [I,A]; C07D0213-73 [I,A]; C07D0239-00 [I,C]; C07D0239-42 [I,A]; C07D0271-00 [I,C]; C07D0271-06 [I,A]
	IPCR	C07D0213-00 [I,C]; C07D0213-56 [I,A]; C07C0257-00 [I,C]; C07C0257-18 [I,A]; C07D0211-00 [I,C*]; C07D0211-46 [I,A]; C07D0213-30 [I,A]; C07D0213-38 [I,A]; C07D0213-65 [I,A]; C07D0213-73 [I,A]; C07D0239-00 [I,C]; C07D0239-42 [I,A]; C07D0265-00 [I,C*]; C07D0265-36 [I,A]; C07D0271-00 [I,C]; C07D0271-06 [I,A]; C07D0295-00 [I,C*]; C07D0295-15 [I,A]; C07D0309-00 [I,C*]; C07D0309-12 [I,A]; C07D0311-00 [I,C*]; C07D0311-04 [I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A]

ES 2298583	ECLA	C07D211/46; C07D213/30C; C07D213/38; C07D213/56; C07D213/65; C07D213/73D; C07D239/42B3; C07D265/36; C07D271/06B; C07D295/14B1F2; C07D309/12; C07D311/04; C07D521/00B2E; M07D; M07D; M07D; M07D; M07D; M07D
	IPCI	C07D0213-00 [I,C]; C07D0213-56 [I,A]; A61K0031-155 [I,C]; A61K0031-155 [I,A]; C07C0243-00 [I,C]; C07C0243-38 [I,A]; C07C0257-00 [I,C]; C07C0257-18 [I,A]; C07C0259-00 [I,C]; C07C0259-18 [I,A]; C07C0271-00 [I,C]; C07C0271-66 [I,A]; C07D0211-00 [I,C]; C07D0211-46 [I,A]; C07D0213-30 [I,A]; C07D0213-38 [I,A]; C07D0213-65 [I,A]; C07D0213-73 [I,A]; C07D0239-00 [I,C]; C07D0239-42 [I,A]; C07D0265-00 [I,C]; C07D0265-36 [I,A]; C07D0271-00 [I,C]; C07D0271-06 [I,A]; C07D0295-00 [I,C]; C07D0295-14 [I,A]; C07D0309-00 [I,C]; C07D0309-12 [I,A]; C07D0311-00 [I,C]; C07D0311-04 [I,A]; C07D0521-00 [I,C]; C07D0521-00 [I,A]
	IPCR	C07D0213-00 [I,C]; C07D0213-56 [I,A]; A61K0031-155 [I,C]; A61K0031-155 [I,A]; C07C0243-00 [I,C]; C07C0243-38 [I,A]; C07C0257-00 [I,C]; C07C0257-18 [I,A]; C07C0259-00 [I,C]; C07C0259-18 [I,A]; C07C0271-00 [I,C]; C07C0271-66 [I,A]; C07D0211-00 [I,C]; C07D0211-46 [I,A]; C07D0213-30 [I,A]; C07D0213-38 [I,A]; C07D0213-65 [I,A]; C07D0213-73 [I,A]; C07D0239-00 [I,C]; C07D0239-42 [I,A]; C07D0265-00 [I,C]; C07D0265-36 [I,A]; C07D0271-00 [I,C]; C07D0271-06 [I,A]; C07D0295-00 [I,C]; C07D0295-14 [I,A]; C07D0309-00 [I,C]; C07D0309-12 [I,A]; C07D0311-00 [I,C]; C07D0311-04 [I,A]; C07D0521-00 [I,C]; C07D0521-00 [I,A]
	ECLA	C07D211/46; C07D213/30C; C07D213/38; C07D213/56; C07D213/65; C07D213/73D; C07D239/42B3; C07D265/36; C07D271/06B; C07D295/14B1F2; C07D309/12; C07D311/04; C07D521/00B2E; M07D; M07D; M07D; M07D; M07D; M07D; M07D; M07D
NO 2005002311	IPCI	C07D0213-56 [ICM,7]; C07D0213-00 [ICM,7,C*]; A61K0031-155 [ICS,7]
	IPCR	C07D0211-00 [I,C*]; C07D0211-46 [I,A]; C07D0213-00 [I,C*]; C07D0213-30 [I,A]; C07D0213-38 [I,A]; C07D0213-56 [I,A]; C07D0213-65 [I,A]; C07D0213-73 [I,A]; C07D0239-00 [I,C*]; C07D0239-42 [I,A]; C07D0265-00 [I,C*]; C07D0265-36 [I,A]; C07D0271-00 [I,C*]; C07D0271-06 [I,A]; C07D0295-00 [I,C*]; C07D0295-15 [I,A]; C07D0309-00 [I,C*]; C07D0309-12 [I,A]; C07D0311-00 [I,C*]; C07D0311-04 [I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A]
	ECLA	C07D211/46; C07D213/30C; C07D213/38; C07D213/56; C07D213/65; C07D213/73D; C07D239/42B3; C07D265/36; C07D271/06B; C07D295/14B1F2; C07D309/12; C07D311/04; C07D521/00B2E; M07D; M07D; M07D; M07D; M07D; M07D; M07D; M07D
MX 2005005446	IPCI	A61K0031-155 [ICM,7]; C07C0243-38 [ICS,7]; C07C0243-00 [ICS,7,C*]; C07C0257-18 [ICS,7]; C07C0257-00 [ICS,7,C*]; C07C0259-18 [ICS,7]; C07C0259-00 [ICS,7,C*]; C07C0271-66 [ICS,7]; C07C0271-00 [ICS,7,C*]; C07D0211-46 [ICS,7]; C07D0211-00 [ICS,7,C*]; C07D0213-00 [ICS,7]; C07D0213-30 [ICS,7]; C07D0213-38 [ICS,7]; C07D0213-56 [ICS,7]; C07D0213-65 [ICS,7]; C07D0213-73 [ICS,7]; C07D0239-42 [ICS,7]; C07D0239-00 [ICS,7,C*]; C07D0265-36 [ICS,7]; C07D0265-00 [ICS,7,C*]; C07D0271-06 [ICS,7]; C07D0271-00 [ICS,7,C*]; C07D0295-14 [ICS,7]; C07D0295-00 [ICS,7,C*]; C07D0309-12 [ICS,7];

C07D0309-00 [ICS,7,C*]; C07D0311-04 [ICS,7];
 C07D0311-00 [ICS,7,C*]; C07D0521-00 [ICS,7]
 ECLA C07D211/46; C07D213/30C; C07D213/38; C07D213/56;
 C07D213/65; C07D213/73D; C07D239/42B3; C07D265/36;
 C07D271/06B; C07D295/14B1F2; C07D309/12; C07D311/04;
 C07D521/00B2E; M07D; M07D; M07D; M07D; M07D; M07D
 C07D0211-46 [ICM,7]; C07D0211-00 [ICM,7,C*]

IN 2005CN01009 IPCI
 OS MARPAT 141:38441
 GI



AB Title compds. I [wherein X = O, S, NR12, SO2; Y = N, CR11; R1 = H, OH, NH2, or (un)substituted (aryl)alkoxycarbonyl, aryloxy carbamoyl, alkanoyl, arylcarbonyl; R2-R4 = independently H, halo, OH, carboxyalkylamino, carbamoylalkylamino, hydroxycycloalkyloxy, (hetero)aryl(oxy), (hetero)aryl(alkyl)amino, etc.; R5 = (cyclo)alkyl; or if X = O or NR12, R5 may be H; R6 = H, (fluoro)alkyl; R7-R11 = independently H, OH, halo, NO2, CHO, or (un)substituted amino, fluoroalkyl, alkoxy, (hetero)aryl(oxy), heterocyclylalkyl, carbamoyl, cycloalkyl(alkoxy), etc.; or R8 and R9 or R8 and R7 are bound to each other to form a ring together with the C's to which they are attached; R12 = H, alkyl(carbonyl); and pharmaceutically acceptable salts thereof] were prepared as inhibitors of the formation of coagulation factors Xa, IXa, and thrombin induced by factor VIIa and tissue factor. For example, 6-fluoroveratraldehyde was converted to (2-fluoro-4,5-dimethoxyphenyl)methoxyacetic acid, which was coupled with 4-aminomethylbenzonitrile to give N-(4-cyanobenzyl)-2-(2-fluoro-4,5-dimethoxyphenyl)-2-methoxyacetamide. Reaction of the nitrile with dry HCl gas in CHCl3/EtOH afforded the amidine II•HCl. The latter suppressed the amidolytic activity of the factor VIIa/tissue factor complex with Ki of 2.21 μM. Thus, I and their pharmaceutical compns. are useful for the treatment and/or prophylaxis of arterial and venous thrombosis, deep vein thrombosis, pulmonary embolism, unstable angina pectoris, cardiac infarction, stroke due to atrial fibrillation, inflammation, arteriosclerosis, and/or tumors (no data).

ST carbamimidoylbenzyl benzeneacetamide pyridineacetamide prepn anticoagulant

thrombolytic antianginal; benzeneacetamide pyridineacetamide
 carbamimidoylbenzyl prepn coagulation factor inhibitor

IT Heart, disease
 (angina pectoris, unstable; preparation of
 N-(carbamimidoylbenzyl)benzeneacetamides and pyridineacetamides as
 coagulation factor inhibitors)

IT Thrombosis
 (arterial; preparation of N-(carbamimidoylbenzyl)benzeneacetamides and
 pyridineacetamides as coagulation factor inhibitors)

IT Heart, disease
 (atrial fibrillation, stroke from; preparation of
 N-(carbamimidoylbenzyl)benzeneacetamides and pyridineacetamides as
 coagulation factor inhibitors)

IT Drug delivery systems
 (capsules, soft; preparation of N-(carbamimidoylbenzyl)benzeneacetamides and
 pyridineacetamides as coagulation factor inhibitors)

IT Drug delivery systems
 (capsules; preparation of N-(carbamimidoylbenzyl)benzeneacetamides and
 pyridineacetamides as coagulation factor inhibitors)

IT Lung, disease
 (embolism; preparation of N-(carbamimidoylbenzyl)benzeneacetamides and
 pyridineacetamides as coagulation factor inhibitors)

IT Anti-inflammatory agents
 Antianginal agents
 Antiarteriosclerotics
 Anticoagulants
 Antitumor agents
 Arteriosclerosis
 Human
 Inflammation
 Neoplasm
 Thrombolytics
 (preparation of N-(carbamimidoylbenzyl)benzeneacetamides and
 pyridineacetamides as coagulation factor inhibitors)

IT Blood-coagulation factors
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (preparation of N-(carbamimidoylbenzyl)benzeneacetamides and
 pyridineacetamides as coagulation factor inhibitors)

IT Embolism
 (pulmonary; preparation of N-(carbamimidoylbenzyl)benzeneacetamides and
 pyridineacetamides as coagulation factor inhibitors)

IT Drug delivery systems
 (sachets; preparation of N-(carbamimidoylbenzyl)benzeneacetamides and
 pyridineacetamides as coagulation factor inhibitors)

IT Drug delivery systems
 (sols., injection; preparation of N-(carbamimidoylbenzyl)benzeneacetamides
 and pyridineacetamides as coagulation factor inhibitors)

IT Brain, disease
 (stroke, due to atrial fibrillation; preparation of
 N-(carbamimidoylbenzyl)benzeneacetamides and pyridineacetamides as
 coagulation factor inhibitors)

IT Drug delivery systems
 (tablets, coated; preparation of N-(carbamimidoylbenzyl)benzeneacetamides
 and pyridineacetamides as coagulation factor inhibitors)

IT Thrombosis
 (venous; preparation of N-(carbamimidoylbenzyl)benzeneacetamides and
 pyridineacetamides as coagulation factor inhibitors)

IT 33224-99-6 412271-20-6 793667-52-4 946699-76-9 1055904-44-3
 1055904-47-6 1055904-50-1 1055904-51-2 1055904-52-3 1055904-53-4
 1055904-58-9 1055904-59-0 1055904-61-4 1055904-64-7 1055904-66-9
 1055904-67-0 1055904-69-2 1055904-73-8 1055904-74-9 1055904-76-1
 1055904-78-3 1055904-80-7 1055904-81-8 1055904-83-0 1055904-85-2

1055904-87-4 1055904-88-5 1055904-91-0 1055904-99-8 1055905-01-5
 1055905-02-6 1055905-04-8 1055905-06-0 1055905-07-1 1055905-10-6
 1055905-11-7 1055905-12-8 1055905-14-0 1055905-17-3 1055905-18-4
 1070987-35-7

RL: PRPH (Prophetic)

(Preparation of N-(carbamimidoylbenzyl)benzeneacetamides and pyridineacetamides as inhibitors of the formation of coagulation factors Xa, IXa, and thrombin induced by factor VIIa and tissue factor)

IT 701263-66-3P, [5-[(4-Carbamidoylbenzylcarbamoyl)(ethoxy)methyl]-2-methoxyphenoxyl]acetic acid ethyl ester hydrochloride 701263-86-7P, [4-[(4-Carbamidoylbenzylcarbamoyl)(methoxy)methyl]phenoxy]acetic acid methyl ester hydrochloride 701264-67-7P, N-(4-Carbamidoylbenzyl)-2-(2,6-difluoro-4-methoxyphenyl)-2-methoxyacetamide hydrochloride 701265-76-1P, N-[4-Carbamidoyl-2-(5-nitropyridin-2-yloxy)benzyl]-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide hydrochloride 701265-82-9P, [5-Carbamidoyl-2-[[2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetyl]amino]methyl]phenoxy]acetic acid ethyl ester hydrochloride 701268-14-6P, [[4'-[(4-Carbamidoylbenzylcarbamoyl)(ethoxy)methyl]-3',5'-difluorobiphenyl-2-yl]oxy]acetic acid ethyl ester hydrochloride 701268-43-1P, 4'-[(4-Carbamidoylbenzylcarbamoyl)(ethoxy)methyl]-3',5'-difluorobiphenyl-3-carboxylic acid methyl ester hydrochloride 701268-44-2P, 2-[4-(6-Aminopyridin-3-yl)-2,6-difluorophenyl]-N-(4-carbamimidoylbenzyl)-2-ethoxyacetamide hydrochloride 701268-75-9P, N-(4-Carbamidoylbenzyl)-2-(2-ethynyl-6-fluorophenyl)-2-methoxyacetamide hydrochloride 701268-78-2P, N-(4-Carbamidoylbenzyl)-2-[2-fluoro-6-(3-hydroxyprop-1-ynyl)phenyl]-2-methoxyacetamide hydrochloride 701268-88-4P 701269-76-3P, [[5-Carbamidoyl-2-[[2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetyl]amino]methyl]phenyl]amino]acetic acid ethyl ester hydrochloride

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (anticoagulant; preparation of N-(carbamimidoylbenzyl)benzeneacetamides and pyridineacetamides as coagulation factor inhibitors)

IT 701263-28-7P 701263-30-1P 701263-34-5P, 2-(4-Benzyloxyphenyl)-N-(4-carbamimidoylbenzyl)-2-methoxyacetamide hydrochloride 701263-37-8P, N-(4-Carbamidoylbenzyl)-2-methoxy-2-(4-phenoxyphenyl)acetamide hydrochloride 701263-39-0P, N-(4-Carbamidoylbenzyl)-2-methoxy-2-(3-phenoxyphenyl)acetamide hydrochloride 701263-41-4P 701263-43-6P, N-(4-Carbamidoylbenzyl)-2-(2-fluorophenyl)-2-methoxyacetamide hydrochloride 701263-44-7P, 2-(3-Benzyloxyphenyl)-N-(4-carbamimidoylbenzyl)-2-methoxyacetamide hydrochloride 701263-45-8P, N-(4-Carbamidoylbenzyl)-2-(3-hydroxyphenyl)-2-methoxyacetamide hydrochloride 701263-46-9P, N-(4-Carbamidoylbenzyl)-2-methoxy-2-(3-nitrophenyl)acetamide hydrochloride 701263-47-0P, 2-(Biphenyl-4-yl)-N-(4-carbamimidoylbenzyl)-2-methoxyacetamide hydrochloride 701263-48-1P, 2-(Benzodioxol-5-yl)-N-(4-carbamimidoylbenzyl)-2-methoxyacetamide hydrochloride 701263-49-2P, 2-(Benzodioxol-5-yl)-N-(4-carbamimidoylbenzyl)-2-ethoxyacetamide hydrochloride 701263-53-8P, N-(4-Carbamidoylbenzyl)-2-[5-ethoxy-2-fluoro-3-[(1-methylpiperidin-4-yl)oxy]phenyl]-2-methoxyacetamide hydrochloride 701263-59-4P, 2-(2-Fluoro-4-methoxyphenyl)-N-[4-(N-aminocarbamidoyl)benzyl]-2-methoxyacetamide 701263-62-9P, [5-[(4-Carbamidoylbenzylcarbamoyl)(methoxy)methyl]-2-methoxyphenoxyl]acetic acid methyl ester hydrochloride 701263-63-0P, N-(4-Carbamidoylbenzyl)-2-[3-(carbamoylmethoxy)-4-methoxyphenyl]-2-methoxyacetamide hydrochloride 701263-67-4P, N-(4-Carbamidoylbenzyl)-2-[3-(carbamoylmethoxy)-4-methoxyphenyl]-2-ethoxyacetamide hydrochloride 701263-68-5P,

[5-[(4-Carbamimidoylbenzylcarbamoyl) (ethoxy)methyl]-2-methoxyphenoxy]acetic acid 701263-71-0P,
N-(4-Carbamimidoylbenzyl)-2-ethoxy-2-(4-ethoxyphenyl)acetamide hydrochloride 701263-73-2P, N-(4-Carbamimidoylbenzyl)-2-methoxy-2-[4-[(1-methylpiperidin-4-yl)oxy]phenyl]acetamide hydrochloride 701263-74-3P,
N-(4-Carbamimidoylbenzyl)-3,3,3-trifluoro-2-methoxy-2-phenylpropionamide hydrochloride 701263-77-6P, N-(4-Carbamimidoylbenzyl)-2-(2-fluoro-4,5-dimethoxyphenyl)-2-methoxyacetamide hydrochloride 701263-80-1P,
N-(4-Carbamimidoylbenzyl)-2-(3-isopropoxyphenyl)-2-methoxyacetamide hydrochloride 701263-81-2P, N-(4-Carbamimidoylbenzyl)-2-[4-(cyclopentylloxy)phenyl]-2-methoxyacetamide hydrochloride 701263-84-5P,
N-(4-Carbamimidoylbenzyl)-2-(4-isopropoxyphenyl)-2-methoxyacetamide hydrochloride 701263-87-8P, [4-[(4-Carbamimidoylbenzylcarbamoyl) (methoxy)methyl]phenoxy]acetic acid 701263-89-0P, N-(4-Carbamimidoylbenzyl)-2-methoxy-2-[3-[(tetrahydropyran-4-yl)oxy]phenyl]acetamide hydrochloride 701263-92-5P,
N-(4-Carbamimidoylbenzyl)-2-(3,5-diethoxy-2-fluorophenyl)-2-methoxyacetamide hydrochloride 701263-95-8P,
N-(4-Carbamimidoylbenzyl)-2-[5-ethoxy-2-fluoro-4-(2-hydroxyethoxy)phenyl]-2-methoxyacetamide hydrochloride 701263-99-2P,
N-(4-Carbamimidoylbenzyl)-2-(3,4-diethoxy-2-fluorophenyl)-2-methoxyacetamide hydrochloride 701264-02-0P,
N-(4-Carbamimidoyl-2-fluorobenzyl)-2-(2-fluoro-4-methoxyphenyl)-2-methoxyacetamide hydrochloride 701264-04-2P,
N-(4-Carbamimidoyl-3-fluorobenzyl)-2-(2-fluoro-4-methoxyphenyl)-2-methoxyacetamide hydrochloride 701264-05-3P,
2-[2,4-Bis(trifluoromethyl)phenyl]-N-(4-carbamimidoylbenzyl)-2-methoxyacetamide hydrochloride 701264-11-1P,
N-(4-Carbamimidoylbenzyl)-2-(2-hydroxy-4-methoxyphenyl)-2-methoxyacetamide acetate 701264-12-2P, N-(4-Carbamimidoylbenzyl)-2-(2-fluoro-5-methoxyphenyl)-2-methoxyacetamide hydrochloride 701264-13-3P,
N-(4-Carbamimidoylbenzyl)-2-(2,3-difluorophenyl)-2-methoxyacetamide hydrochloride 701264-14-4P, N-(4-Carbamimidoylbenzyl)-2-(2,6-difluorophenyl)-2-methoxyacetamide hydrochloride 701264-15-5P,
2-(4-Bromo-2-fluorophenyl)-N-(4-carbamimidoylbenzyl)-2-methoxyacetamide hydrochloride 701264-17-7P, 2-(4-Bromo-2-fluorophenyl)-N-(4-carbamimidoylbenzyl)-2-ethoxyacetamide hydrochloride 701264-19-9P,
2-(4-Bromo-2-fluorophenyl)-N-(4-carbamimidoylbenzyl)-2-propoxyacetamide hydrochloride 701264-20-2P, N-(4-Carbamimidoylbenzyl)-2-(2-fluoro-4-trifluoromethylphenyl)-2-methoxyacetamide hydrochloride 701264-22-4P,
N-(4-Carbamimidoylbenzyl)-2-[4-(2-hydroxyethoxy)phenyl]-2-methoxyacetamide hydrochloride 701264-24-6P, N-(4-Carbamimidoylbenzyl)-2-(4-dimethylaminophenyl)-2-methoxyacetamide hydrochloride 701264-25-7P,
N-(4-Carbamimidoylbenzyl)-2-methoxy-2-(3-oxo-3,4-dihydro-2H-benzo[1,4]oxazin-6-yl)acetamide hydrochloride 701264-27-9P,
N-(4-Carbamimidoylbenzyl)-2-methoxy-2-[4-(pyrrolidin-1-yl)phenyl]acetamide hydrochloride 701264-29-1P, N-(4-Carbamimidoylbenzyl)-2-(2-chlorophenyl)-2-methoxyacetamide hydrochloride 701264-32-6P,
2-(4-Acetylaminophenyl)-N-(4-carbamimidoylbenzyl)-2-methoxyacetamide hydrochloride 701264-35-9P, N-(4-Carbamimidoylbenzyl)-2-methoxy-2-(4-trifluoromethoxyphenyl)acetamide hydrochloride 701264-37-1P,
N-(4-Carbamimidoylbenzyl)-2-[4-(imidazol-1-yl)phenyl]-2-methoxyacetamide hydrochloride 701264-40-6P, N-(4-Carbamimidoylbenzyl)-2-methoxy-2-(6-methoxynaphthalen-2-yl)acetamide hydrochloride 701264-42-8P,
N-(4-Carbamimidoylbenzyl)-2-methoxy-2-[4-(morpholin-4-yl)phenyl]acetamide hydrochloride 701264-43-9P, N-(4-Carbamimidoylbenzyl)-2-methoxy-2-[2-(morpholin-4-yl)phenyl]acetamide hydrochloride 701264-45-1P,
N-(4-Carbamimidoylbenzyl)-2-[4-(3-dimethylaminopropoxy)phenyl]-2-methoxyacetamide hydrochloride 701264-48-4P,
N-(4-Carbamimidoylbenzyl)-2-(4'-dimethylamino-3-fluorobiphenyl-4-yl)-2-methoxyacetamide hydrochloride 701264-49-5P,
N-(4-Carbamimidoylbenzyl)-2-(3-fluoro-4'-methoxybiphenyl-4-yl)-2-

methoxyacetamide hydrochloride 701264-50-8P,
N-(4-Carbamididoilylbenzyl)-2-(3-fluoro-2'-methoxybiphenyl-4-yl)-2-
methoxyacetamide hydrochloride 701264-51-9P,
N-(4-Carbamididoilylbenzyl)-2-(3-fluorobiphenyl-4-yl)-2-methoxyacetamide
hydrochloride 701264-52-0P, N-(4-Carbamididoilylbenzyl)-2-(3-fluoro-3'-
methoxybiphenyl-4-yl)-2-methoxyacetamide hydrochloride 701264-55-3P,
N-(4-Carbamididoilylbenzyl)-2-(2,2-dimethylchroman-6-yl)-2-methoxyacetamide
hydrochloride 701264-59-7P, 2-Ethoxy-2-(2-fluoro-4-methoxyphenyl)-N-(4-
(N-hydroxycarbamididoilylbenzyl)acetamide 701264-61-1P,
4-[[3-(3-Cyclopentylloxy-4-methoxyphenyl)-3-methoxy-2-
oxopropyl]amino]benzamidine hydrochloride 701264-64-4P,
N-(4-Carbamididoilylbenzyl)-2-(2-chloro-4-methoxyphenyl)-2-methoxyacetamide
hydrochloride 701264-69-9P, N-(4-Carbamididoilylbenzyl)-2-(2-fluoro-4-
methoxyphenyl)-2-propoxyacetamide hydrochloride 701264-71-3P,
N-(4-Carbamididoilylbenzyl)-2-methoxy-2-(naphthalen-1-yl)propionamide
hydrochloride 701264-73-5P, 2-(4-Bromo-2,6-difluorophenyl)-N-(4-
carbamididoilylbenzyl)-2-methoxyacetamide hydrochloride 701264-78-0P,
N-(4-Carbamididoilylbenzyl)-2-(2-fluoro-4-isopropoxyphenyl)-2-
methoxyacetamide hydrochloride 701264-80-4P,
N-(4-Carbamididoilylbenzyl)-2-(2-fluoro-4-isobutoxyphenyl)-2-
methoxyacetamide hydrochloride 701264-82-6P,
N-(4-Carbamididoilylbenzyl)-2-[2-fluoro-4-[2-(4-fluorophenyl)ethoxy]phenyl]-
2-methoxyacetamide hydrochloride 701264-85-9P,
N-(4-Carbamididoilylbenzyl)-2-[2-fluoro-4-(pyridin-3-yl)phenyl]-2-
methoxyacetamide hydrochloride 701264-87-1P,
N-(4-Carbamididoilylbenzyl)-2-[2-fluoro-4-(pyridin-4-yl)phenyl]-2-
methoxyacetamide hydrochloride 701264-90-6P,
2-(5-Bromo-2-fluorophenyl)-N-(4-carbamididoilylbenzyl)-2-methoxyacetamide
hydrochloride 701264-92-8P, N-(4-Carbamididoilylbenzyl)-2-(4-
fluorobiphenyl-3-yl)-2-methoxyacetamide hydrochloride 701264-95-1P,
N-(4-Carbamididoilylbenzyl)-2-(2-fluoro-5-methylphenyl)-2-methoxyacetamide
hydrochloride 701264-98-4P, N-(4-Carbamididoilylbenzyl)-2-(2-fluoro-5-
trifluoromethylphenyl)-2-methoxyacetamide hydrochloride 701265-01-2P,
N-(4-Carbamididoilylbenzyl)-2-(2-fluoro-6-methoxyphenyl)-2-methoxyacetamide
hydrochloride 701265-09-0P 701265-11-4P 701265-13-6P 701265-15-8P
701265-17-0P 701265-19-2P 701265-23-8P,
N-(4-Carbamididoilylbenzyl)-2-[2-fluoro-4-(2-phenoxyethoxy)phenyl]-2-
methoxyacetamide hydrochloride 701265-25-0P,
N-(4-Carbamididoilylbenzyl)-2-methoxy-2-(pyridin-2-yl)acetamide
hydrochloride 701265-27-2P, N-(4-Carbamididoilylbenzyl)-2-methoxy-2-
phenylpropionamide hydrochloride 701265-28-3P,
2-(4-Bromo-2,6-difluorophenyl)-N-(4-carbamididoilylbenzyl)-2-ethoxyacetamide
hydrochloride 701265-30-7P, N-(4-Carbamididoilylbenzyl)-2-[2-fluoro-6-(2-
hydroxyethoxy)phenyl]-2-methoxyacetamide hydrochloride 701265-32-9P,
N-(4-Carbamididoilylbenzyl)-2-[2-(carbamoylethoxy)-6-fluorophenyl]-2-
methoxyacetamide 701265-36-3P, 2-(Biphenyl-4-yl)-N-(4-
carbamididoilylbenzyl)-2-ethoxypropionamide hydrochloride 701265-42-1P,
2-[3-[1-(Benzenesulfonyl)piperidin-4-yloxy]-5-ethoxy-2-fluorophenyl]-N-(4-
carbamididoilylbenzyl)-2-methoxyacetamide hydrochloride 701265-43-2P,
N-(4-Carbamididoilylbenzyl)-2-[5-ethoxy-2-fluoro-3-[[1-
(methanesulfonyl)piperidin-4-yl]oxy]phenyl]-2-methoxyacetamide
hydrochloride 701265-44-3P, 2-[3-(1-Acetylpiperidin-4-yloxy)-5-ethoxy-2-
fluorophenyl]-N-(4-carbamididoilylbenzyl)-2-methoxyacetamide hydrochloride
701265-45-4P, 2-[3-(1-Benzoylpiperidin-4-yloxy)-5-ethoxy-2-fluorophenyl]-N-(4-
carbamididoilylbenzyl)-2-methoxyacetamide hydrochloride 701265-47-6P,
N-(4-Carbamididoilyl-2-chlorobenzyl)-2-(2-fluoro-4-methoxyphenyl)-2-
methoxyacetamide hydrochloride 701265-49-8P,
N-(4-Carbamididoilyl-2-chlorobenzyl)-2-ethoxy-2-(2-fluoro-4-
methoxyphenyl)acetamide hydrochloride 701265-54-5P,
N-(4-Carbamididoilyl-2-chlorobenzyl)-2-(2,6-difluoro-4-methoxyphenyl)-2-
ethoxyacetamide hydrochloride 701265-56-7P,
N-(4-Carbamididoilyl-2-chlorobenzyl)-2-(2,6-difluoro-4-methoxyphenyl)-2-

methoxyacetamide hydrochloride 701265-60-3P,
 N-(4-Carbamididoyl-3-chlorobenzyl)-2-ethoxy-2-(2-fluoro-4-
 methoxyphenyl)acetamide acetate 701265-61-4P,
 2-(4-Bromo-2,6-difluorophenyl)-N-(4-carbamimidoyl-2-methoxybenzyl)-2-
 ethoxyacetamide hydrochloride 701265-63-6P,
 N-(4-Carbamididoyl-2-methoxybenzyl)-2-ethoxy-2-(2-fluoro-4-
 methoxyphenyl)acetamide hydrochloride 701265-67-0P,
 N-(4-Carbamididoyl-2-phenoxybenzyl)-2-ethoxy-2-(2-fluoro-4-
 methoxyphenyl)acetamide hydrochloride 701265-68-1P,
 N-[4-Carbamididoyl-2-(o-tolyloxy)benzyl]-2-ethoxy-2-(2-fluoro-4-
 methoxyphenyl)acetamide hydrochloride 701265-69-2P,
 N-[4-Carbamididoyl-2-(4-fluorophenoxy)benzyl]-2-ethoxy-2-(2-fluoro-4-
 methoxyphenyl)acetamide hydrochloride 701265-71-6P 701265-77-2P,
 N-[2-(5-Aminopyridin-2-yloxy)-4-carbamimidoylbenzyl]-2-ethoxy-2-(2-fluoro-
 4-methoxyphenyl)acetamide hydrochloride 701265-80-7P,
 N-(5-Carbamididoylbiphenyl-2-ylmethyl)-2-ethoxy-2-(2-fluoro-4-
 methoxyphenyl)acetamide hydrochloride 701265-83-0P,
 N-[4-Carbamididoyl-2-(carbamoylmethoxy)benzyl]-2-ethoxy-2-(2-fluoro-4-
 methoxyphenyl)acetamide hydrochloride 701265-84-1P,
 N-(4-Carbamididoyl-2-isopropoxybenzyl)-2-ethoxy-2-(2-fluoro-4-
 methoxyphenyl)acetamide hydrochloride 701265-85-2P,
 N-[4-Carbamididoyl-2-(2-hydroxyethoxy)benzyl]-2-ethoxy-2-(2-fluoro-4-
 methoxyphenyl)acetamide hydrochloride 701265-86-3P 701265-87-4P,
 [5-Carbamididoyl-2-[[2-ethoxy-2-(2-fluoro-4-
 methoxyphenyl)acetyl]amino]methyl]phenoxy]acetic acid 701265-88-5P
 701265-89-6P 701265-90-9P 701265-91-0P 701265-94-3P,
 N-[4-Carbamididoyl-2-(carbamoylmethoxy)benzyl]-2-(2-fluoro-4-
 methoxyphenyl)-2-methoxyacetamide hydrochloride 701265-96-5P,
 N-(4-Carbamididoyl-2-phenoxybenzyl)-2-(2,6-difluoro-4-methoxyphenyl)-2-
 ethoxyacetamide hydrochloride 701265-98-7P,
 N-(4-Carbamididoyl-2-methoxybenzyl)-2-(2,6-difluoro-4-methoxyphenyl)-2-
 ethoxyacetamide hydrochloride 701266-01-5P,
 N-[4-Carbamididoyl-2-(carbamoylmethoxy)benzyl]-2-(2,6-difluoro-4-
 methoxyphenyl)-2-ethoxyacetamide hydrochloride 701266-02-6P,
 N-[4-Carbamididoyl-2-(2-fluorobenzyloxy)benzyl]-2-(2,6-difluoro-4-
 methoxyphenyl)-2-ethoxyacetamide hydrochloride 701266-03-7P,
 N-[4-Carbamididoyl-2-(5-chloro-2-fluorobenzyloxy)benzyl]-2-(2,6-difluoro-4-
 methoxyphenyl)-2-ethoxyacetamide hydrochloride 701266-04-8P,
 N-[4-Carbamididoyl-2-[(2-methoxyethylcarbamoyl)methoxy]benzyl]-2-(2,6-
 difluoro-4-methoxyphenyl)-2-ethoxyacetamide hydrochloride 701266-05-9P,
 N-[4-Carbamididoyl-2-[[2-(morpholin-4-yl)ethyl]carbamoyl]methoxy]benzyl]-
 2-(2,6-difluoro-4-methoxyphenyl)-2-ethoxyacetamide hydrochloride
 701266-06-0P, N-[4-Carbamididoyl-2-[(2-
 diethylaminoethylcarbamoyl)methoxy]benzyl]-2-(2,6-difluoro-4-
 methoxyphenyl)-2-ethoxyacetamide hydrochloride 701266-07-1P,
 N-[4-Carbamididoyl-2-[(1,2,4)oxadiazol-3-yl]methoxy]benzyl]-2-(2,6-
 difluoro-4-methoxyphenyl)-2-ethoxyacetamide hydrochloride 701266-08-2P,
 N-(4-Carbamididoyl-2-carbamimidoylmethoxybenzyl)-2-(2,6-difluoro-4-
 methoxyphenyl)-2-ethoxyacetamide hydrochloride 701266-09-3P,
 N-[2-(1H-Benzimidazol-2-ylmethoxy)-4-carbamimidoylbenzyl]-2-(2,6-difluoro-
 4-methoxyphenyl)-2-ethoxyacetamide hydrochloride 701266-11-7P
 701266-13-9P 701266-14-0P, N-[4-Carbamididoyl-2-
 (carbamoylmethoxy)benzyl]-2-(2,6-difluoro-4-methoxyphenyl)-2-
 methoxyacetamide hydrochloride 701266-17-3P,
 N-[4-Carbamididoyl-2-[(methylcarbamoyl)methoxy]benzyl]-2-(2,6-difluoro-4-
 methoxyphenyl)-2-methoxyacetamide hydrochloride 701266-18-4P,
 N-[4-Carbamididoyl-2-[(isopropylcarbamoyl)methoxy]benzyl]-2-(2,6-difluoro-
 4-methoxyphenyl)-2-methoxyacetamide hydrochloride 701266-19-5P,
 N-[4-Carbamididoyl-2-[(4-fluorophenylcarbamoyl)methoxy]benzyl]-2-(2,6-
 difluoro-4-methoxyphenyl)-2-methoxyacetamide hydrochloride 701266-20-8P,
 N-[4-Carbamididoyl-2-(pyridin-2-ylmethoxy)benzyl]-2-(2,6-difluoro-4-
 methoxyphenyl)-2-methoxyacetamide hydrochloride 701266-22-0P,

N-[4-Carbamidoyl-2-(2,2,2-trifluoroethoxy)benzyl]-2-(2,6-difluoro-4-methoxyphenyl)-2-methoxyacetamide hydrochloride 701266-23-1P,
 N-[4-Carbamidoyl-2-(pyridin-3-ylmethoxy)benzyl]-2-(2,6-difluoro-4-methoxyphenyl)-2-methoxyacetamide hydrochloride 701266-24-2P,
 N-[4-Carbamidoyl-2-(pyridin-4-ylmethoxy)benzyl]-2-(2,6-difluoro-4-methoxyphenyl)-2-methoxyacetamide hydrochloride 701266-31-1P,
 N-(4-Carbamidoylbenzyl)-2-(2,6-difluoro-4-hydroxyphenyl)-2-ethoxyacetamide hydrochloride 701266-33-3P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-4-[2-(morpholin-4-yl)ethoxy]phenyl]-2-ethoxyacetamide dihydrochloride 701266-34-4P,
 N-(4-Carbamidoylbenzyl)-2-(2,6-difluoro-4-phenethyloxyphenyl)-2-ethoxyacetamide hydrochloride 701266-35-5P,
 N-(4-Carbamidoylbenzyl)-2-[4-(cyclopropylmethoxy)-2,6-difluorophenyl]-2-ethoxyacetamide hydrochloride 701266-36-6P,
 N-(4-Carbamidoylbenzyl)-2-ethoxy-2-(4-ethoxy-2,6-difluorophenyl)acetamide hydrochloride 701266-40-2P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-4-(4-methoxyphenoxy)phenyl]-2-ethoxyacetamide 701266-43-5P, N-(4-Carbamidoylbenzyl)-2-[4-(3,4-dimethoxyphenoxy)-2,6-difluorophenyl]-2-ethoxyacetamide hydrochloride 701266-47-9P, N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-4-(3-methoxyphenoxy)phenyl]-2-ethoxyacetamide hydrochloride 701266-51-5P,
 2-[4-(3-Acetylaminophenoxy)-2,6-difluorophenyl]-N-(4-carbamidoylbenzyl)-2-ethoxyacetamide hydrochloride 701266-54-8P,
 N-(4-Carbamidoylbenzyl)-2-[4-(4-cyanophenoxy)-2,6-difluorophenyl]-2-ethoxyacetamide hydrochloride 701266-58-2P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-4-(3-trifluoromethoxyphenoxy)phenyl]-2-ethoxyacetamide hydrochloride 701266-65-1P, 4-[(4-Carbamidoylbenzylcarbamoyl)(ethoxy)methyl]-3,5-difluoro-N-isobutylbenzamide hydrochloride 701266-66-2P,
 4-[(4-Carbamidoylbenzylcarbamoyl)(ethoxy)methyl]-N-ethyl-3,5-difluorobenzamide hydrochloride 701266-67-3P,
 4-[(4-Carbamidoylbenzylcarbamoyl)(ethoxy)methyl]-3,5-difluoro-N-(2-methoxyethyl)benzamide hydrochloride 701266-68-4P,
 4-[(4-Carbamidoylbenzylcarbamoyl)(ethoxy)methyl]-N-cyclopentyl-3,5-difluorobenzamide hydrochloride 701266-69-5P,
 4-[(4-Carbamidoylbenzylcarbamoyl)(ethoxy)methyl]-3,5-difluoro-N-(2,2,2-trifluoroethyl)benzamide hydrochloride 701266-70-8P,
 4-[(4-Carbamidoylbenzylcarbamoyl)(ethoxy)methyl]-N-cyclopropylmethyl-3,5-difluorobenzamide hydrochloride 701266-77-5P,
 N-(4-Carbamidoylbenzyl)-2-(2,6-difluoro-3-hydroxyphenyl)-2-ethoxyacetamide hydrochloride 701266-78-6P,
 N-(4-Carbamidoylbenzyl)-2-ethoxy-2-[3-[2-(2-ethoxyethoxy)ethoxy]-2,6-difluorophenyl]acetamide hydrochloride 701266-79-7P,
 N-(4-Carbamidoylbenzyl)-2-[3-(3-dimethylaminopropoxy)-2,6-difluorophenyl]-2-ethoxyacetamide dihydrochloride 701266-80-0P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-3-[2-[2-(2-methoxyethoxy)ethoxy]ethoxy]phenyl]-2-ethoxyacetamide hydrochloride 701266-81-1P, N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-3-[3-(pyridin-4-yl)propoxy]phenyl]-2-ethoxyacetamide dihydrochloride 701266-82-2P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-3-[2-(pyrrolidin-1-yl)ethoxy]phenyl]-2-ethoxyacetamide dihydrochloride 701266-83-3P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-3-(1-methylcyclopropylmethoxy)phenyl]-2-ethoxyacetamide hydrochloride 701266-84-4P, N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-3-[2-(piperidin-1-yl)ethoxy]phenyl]-2-ethoxyacetamide dihydrochloride 701266-85-5P,
 701266-86-6P, N-(4-Carbamidoylbenzyl)-2-ethoxy-2-[3-(2-ethoxyethoxy)-2,6-difluorophenyl]acetamide hydrochloride 701266-87-7P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-3-(2-methoxyethoxy)phenyl]-2-ethoxyacetamide hydrochloride 701266-88-8P,
 N-(4-Carbamidoylbenzyl)-2-[3-(3-dimethylamino-2,2-dimethylpropoxy)-2,6-difluorophenyl]-2-ethoxyacetamide dihydrochloride 701266-89-9P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-3-[2-(thiophen-2-

yl)ethoxy|phenyl]-2-ethoxyacetamide hydrochloride 701266-90-2P
 701266-91-3P, N-(4-Carbamididoylbenzyl)-2-(2,6-difluoro-3-isobutoxyphenyl)-
 2-ethoxyacetamide hydrochloride 701266-92-4P 701266-93-5P,
 N-(4-Carbamididoylbenzyl)-2-[3-(2-cyclopropylethoxy)-2,6-difluorophenyl]-2-
 ethoxyacetamide hydrochloride 701266-94-6P,
 N-(4-Carbamididoylbenzyl)-2-ethoxy-2-(3-ethoxy-2,6-
 difluorophenyl)acetamide hydrochloride 701266-95-7P,
 N-(4-Carbamididoylbenzyl)-2-(2,6-difluoro-3-propoxyphenyl)-2-
 ethoxyacetamide hydrochloride 701266-96-8P
 , N-(4-Carbamididoylbenzyl)-2-[3-(cyclopropylmethoxy)-2,6-difluorophenyl]-2-
 ethoxyacetamide hydrochloride 701266-97-9P,
 N-(4-Carbamididoylbenzyl)-2-[3-(2-dimethylaminoethoxy)-2,6-difluorophenyl]-
 2-ethoxyacetamide dihydrochloride 701266-98-0P,
 N-(4-Carbamididoylbenzyl)-2-[3-(cyclobutylmethoxy)-2,6-difluorophenyl]-2-
 ethoxyacetamide hydrochloride 701266-99-1P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-3-[2-(2-oxopyrrolidin-1-
 yl)ethoxy|phenyl]-2-ethoxyacetamide hydrochloride 701267-00-7P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-3-(3,3,3-
 trifluoropropoxy)phenyl]-2-ethoxyacetamide hydrochloride 701267-01-8P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-3-[2-(pyridin-3-
 yl)ethoxy|phenyl]-2-ethoxyacetamide dihydrochloride 701267-02-9P,
 N-(4-Carbamididoylbenzyl)-2-[3-[(diethylcarbamoyl)methoxy]-2,6-
 difluorophenyl]-2-ethoxyacetamide hydrochloride 701267-03-0P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-3-[2-(morpholin-4-
 yl)ethoxy|phenyl]-2-ethoxyacetamide dihydrochloride 701267-04-1P
 701267-05-2P 701267-06-3P, N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-3-
 [2-(pyridin-2-yl)ethoxy|phenyl]-2-ethoxyacetamide dihydrochloride
 701267-07-4P 701267-08-5P, N-(4-Carbamididoylbenzyl)-2-(2,6-difluoro-3-
 methoxyphenyl)-2-ethoxyacetamide hydrochloride 701267-09-6P,
 N-(4-Carbamididoylbenzyl)-2-(3-cyclohexyloxy-2,6-difluorophenyl)-2-
 ethoxyacetamide hydrochloride 701267-10-9P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-3-[piperidin-4-yl)oxy|phenyl]-2-
 ethoxyacetamide dihydrochloride 701267-15-4P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-3-(4-fluorophenoxy)phenyl]-2-
 ethoxyacetamide hydrochloride 701267-16-5P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-3-[(pyridin-3-yl)oxy|phenyl]-2-
 ethoxyacetamide dihydrochloride 701267-17-6P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-3-[(3-
 trifluoromethylphenyl)oxy|phenyl]-2-ethoxyacetamide hydrochloride
 701267-18-7P, N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-3-(m-
 toxyloxy)phenyl]-2-ethoxyacetamide hydrochloride 701267-19-8P,
 N-(4-Carbamididoylbenzyl)-2-ethoxy-2-[3-(3-ethoxyphenoxy)-2,6-
 difluorophenyl]acetamide hydrochloride 701267-23-4P,
 N-(4-Carbamididoylbenzyl)-2-ethoxy-2-[3-(1-ethylpropoxy)-2,6-
 difluorophenyl]acetamide acetate 701267-25-6P,
 N-(4-Carbamididoylbenzyl)-2-(3-cyclopentyloxy-2,6-difluorophenyl)-2-
 ethoxyacetamide acetate 701267-27-8P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-3-[(tetrahydropyran-4-
 yl)oxy|phenyl]-2-ethoxyacetamide acetate 701267-31-4P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-3-(pyridin-2-yl)phenyl]-2-
 ethoxyacetamide dihydrochloride 701267-32-5P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-3-(6-methoxypyridin-3-yl)phenyl]-
 2-ethoxyacetamide dihydrochloride 701267-33-6P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-3-(pyridin-3-yl)phenyl]-2-
 ethoxyacetamide dihydrochloride 701267-35-8P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-3-(pyrimidin-5-yl)phenyl]-2-
 ethoxyacetamide dihydrochloride 701267-36-9P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-3-(pyridin-4-yl)phenyl]-2-
 ethoxyacetamide dihydrochloride 701267-43-8P,
 N-(4-Carbamididoylbenzyl)-2-(2,4-difluoro-3'-methylbiphenyl-3-yl)-2-
 methoxyacetamide 701267-44-9P, N-(4-Carbamididoylbenzyl)-2-(2,4-difluoro-
 4'-methylbiphenyl-3-yl)-2-methoxyacetamide hydrochloride 701267-46-1P,

N-(4-Carbamidoylbenzyl)-2-methoxy-2-(2,4,4'-trifluorobiphenyl-3-yl)acetamide acetate 701267-47-2P,
 N-(4-Carbamidoylbenzyl)-2-(2,4-difluoro-4'-methylsulfonylbiphenyl-3-yl)-2-methoxyacetamide hydrochloride 701267-49-4P,
 N-(4-Carbamidoylbenzyl)-2-(2,4-difluoro-3'-trifluoromethylbiphenyl-3-yl)-2-methoxyacetamide acetate 701267-50-7P,
 N-(4-Carbamidoylbenzyl)-2-(2,4-difluoro-4'-methoxybiphenyl-3-yl)-2-methoxyacetamide hydrochloride 701267-55-2P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-3-(morpholin-4-yl)carbonyl]phenyl]-2-methoxyacetamide acetate 701267-57-4P
 701267-59-6P 701267-61-0P 701267-63-2P 701267-65-4P 701267-66-5P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-3-(pyridin-2-yl)methoxy]phenyl]-2-methoxyacetamide dihydrochloride 701267-67-6P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-3-(pyridin-3-yl)methoxy]phenyl]-2-methoxyacetamide dihydrochloride 701267-68-7P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-3-(pyridin-4-yl)methoxy]phenyl]-2-methoxyacetamide dihydrochloride 701267-70-1P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-3-(4-fluorophenoxy)phenyl]-2-methoxyacetamide acetate 701267-74-5P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-3-(pyridin-3-yl)oxy]phenyl]-2-methoxyacetamide acetate 701267-76-7P,
 N-(4-Carbamidoylbenzyl)-2-(3,5-difluorobiphenyl-4-yl)-2-methoxyacetamide hydrochloride 701267-78-9P, N-(4-Carbamidoylbenzyl)-2-(3,5-difluorobiphenyl-4-yl)-2-ethoxyacetamide hydrochloride 701267-81-4P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-4-(1H-indol-5-yl)phenyl]-2-ethoxyacetamide acetate 701267-85-8P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-4-(furan-2-yl)phenyl]-2-ethoxyacetamide acetate 701267-87-0P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-4-(tetrahydrofuran-2-yl)phenyl]-2-ethoxyacetamide acetate 701267-93-8P,
 [[4'-[(4-Carbamidoylbenzyl)carbamoyl] (ethoxy)methyl]-3',5'-difluorobiphenyl-3-yl]oxy]acetic acid 701267-95-0P,
 N-(4-Carbamidoylbenzyl)-2-[3'-(carbamoylmethoxy)-3,5-difluorobiphenyl-4-yl]-2-ethoxyacetamide hydrochloride 701267-97-2P,
 N-(4-Carbamidoylbenzyl)-2-[3,5-difluoro-3'-(2-hydroxyethoxy)biphenyl-4-yl]-2-ethoxyacetamide hydrochloride 701267-99-4P,
 N-(4-Carbamidoylbenzyl)-2-[3'-(3-dimethylaminopropoxy)-3,5-difluorobiphenyl-4-yl]-2-ethoxyacetamide hydrochloride 701268-05-5P,
 2-[2'-(2-Benzyloxyethoxy)-3,5-difluorobiphenyl-4-yl]-N-(4-carbamimidoylbenzyl)-2-ethoxyacetamide hydrochloride 701268-10-2P,
 N-(4-Carbamidoylbenzyl)-2-[2'-(2-dimethylaminoethoxy)-3,5-difluorobiphenyl-4-yl]-2-ethoxyacetamide hydrochloride 701268-12-4P,
 N-(4-Carbamidoylbenzyl)-2-[3,5-difluoro-2'-(2-hydroxyethoxy)biphenyl-4-yl]-2-ethoxyacetamide hydrochloride 701268-16-8P,
 [[4'-[(4-Carbamidoylbenzyl)carbamoyl] (ethoxy)methyl]-3',5'-difluorobiphenyl-2-yl]oxy]acetic acid 701268-21-5P,
 N-(4-Carbamidoylbenzyl)-2-[2'-(carbamoylmethoxy)-3,5-difluorobiphenyl-4-yl]-2-ethoxyacetamide acetate 701268-27-1P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-4-(pyridin-4-yl)phenyl]-2-ethoxyacetamide hydrochloride 701268-29-3P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-4-(pyrimidin-5-yl)phenyl]-2-ethoxyacetamide hydrochloride

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(anticoagulant; preparation of N-(carbamimidoylbenzyl)benzeneacetamides and pyridineacetamides as coagulation factor inhibitors)

IT 701268-31-7P, N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-4-(pyrimidin-2-yl)phenyl]-2-ethoxyacetamide hydrochloride 701268-33-9P,
 N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-4-(pyridin-2-yl)phenyl]-2-ethoxyacetamide hydrochloride 701268-35-1P,
 2-[4-(2-Aminopyrimidin-5-yl)-2,6-difluorophenyl]-N-(4-carbamimidoylbenzyl)-

2-ethoxyacetamide hydrochloride 701268-38-4P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-4-(pyridin-3-yl)phenyl]-2-ethoxyacetamide hydrochloride 701268-40-8P,
 2-[4-(6-Aminopyridin-2-yl)-2,6-difluorophenyl]-N-(4-carbamimidoylbenzyl)-2-ethoxyacetamide hydrochloride 701268-42-0P,
 2-[4-(5-Aminopyridin-2-yl)-2,6-difluorophenyl]-N-(4-carbamimidoylbenzyl)-2-ethoxyacetamide hydrochloride 701268-46-4P,
 4'-[(4-Carbamididoylbenzyl)carbamoyl] (ethoxy)methyl-3',5'-difluorobiphenyl-3-carboxylic acid 701268-50-0P, 2-[4-(6-Aminopyridin-3-yl)-2,6-difluorophenyl]-2-ethoxy-N-[4-(N-hydroxycarbamididoyl)benzyl]acetamide 701268-56-6P, N-(4-Carbamididoylbenzyl)-2-(3,5-difluoro-2'-hydroxymethylbiphenyl-4-yl)-2-ethoxyacetamide hydrochloride 701268-58-8P, N-(4-Carbamididoylbenzyl)-2-(2'-chloromethyl-3,5-difluorobiphenyl-4-yl)-2-ethoxyacetamide 701268-61-3P,
 2-(2'-Aminomethyl-3,5-difluorobiphenyl-4-yl)-N-(4-carbamimidoylbenzyl)-2-ethoxyacetamide acetate 701268-69-1P,
 N-(4-Carbamididoylbenzyl)-2-(2-fluoro-4-methoxy-3-phenoxyphenyl)-2-methoxyacetamide hydrochloride 701268-76-0P,
 N-(4-Carbamididoylbenzyl)-2-(2-ethyl-6-fluorophenyl)-2-methoxyacetamide hydrochloride 701268-79-3P, N-(4-Carbamididoylbenzyl)-2-[2-fluoro-6-(3-hydroxypropyl)phenyl]-2-methoxyacetamide hydrochloride 701268-81-7P, N-(4-Carbamididoylbenzyl)-2-(3-fluorobiphenyl-2-yl)-2-methoxyacetamide hydrochloride 701268-82-8P, 2-(3'-Amino-3-fluorobiphenyl-2-yl)-N-(4-carbamimidoylbenzyl)-2-methoxyacetamide hydrochloride 701268-83-9P,
 N-(4-Carbamididoylbenzyl)-2-(3-fluoro-3'-nitrobiphenyl-2-yl)-2-methoxyacetamide hydrochloride 701268-85-1P,
 2-[2-(6-Aminopyridin-2-yl)-6-fluorophenyl]-N-(4-carbamimidoylbenzyl)-2-methoxyacetamide acetate 701268-89-5P,
 N-(4-Carbamididoylbenzyl)-2-(2-fluoro-6-phenoxyphenyl)-2-methoxyacetamide hydrochloride 701268-90-8P, N-(4-Carbamididoylbenzyl)-2-[2-(3-dimethylaminopropoxy)-6-fluorophenyl]-2-methoxyacetamide hydrochloride 701268-91-9P, N-(4-Carbamididoylbenzyl)-2-(2,6-difluoro-4-methoxyphenyl)-2-ethoxyacetamide hydrochloride 701268-94-2P,
 2-(4-Benzyloxy-2,6-difluorophenyl)-N-(4-carbamimidoylbenzyl)-2-ethoxyacetamide hydrochloride 701268-99-7P,
 N-(4-Carbamididoylbenzyl)-2-(2,6-difluoro-4-isopropoxyphenyl)-2-ethoxyacetamide hydrochloride 701269-01-4P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-4-[(pyridin-2-yl)methoxy]phenyl]-2-ethoxyacetamide hydrochloride 701269-05-8P,
 2-[2,6-Difluoro-4-(pyridin-2-ylmethoxy)phenyl]-2-ethoxy-N-[4-(N-hydroxycarbamididoyl)benzyl]acetamide 701269-07-0P,
 [Amino[4-[[[2-(2,6-difluoro-4-(pyridin-2-ylmethoxy)phenyl]-2-ethoxyacetyl]amino]methyl]phenyl]methylene]carbamic acid ethyl ester 701269-08-1P, N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-4-[(pyridin-3-yl)methoxy]phenyl]-2-ethoxyacetamide hydrochloride 701269-09-2P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-4-[(pyridin-4-yl)methoxy]phenyl]-2-ethoxyacetamide hydrochloride 701269-11-6P,
 N-(4-Carbamididoylbenzyl)-2-(2,6-difluoro-4-phenoxyphenyl)-2-ethoxyacetamide hydrochloride 701269-12-7P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-4-[(pyridin-3-yl)oxy]phenyl]-2-ethoxyacetamide hydrochloride 701269-13-8P,
 N-(4-Carbamididoylbenzyl)-2-(2,6-difluoro-3-isopropoxyphenyl)-2-ethoxyacetamide hydrochloride 701269-14-9P,
 N-(4-Carbamididoylbenzyl)-2-[3-(carbamoylmethoxy)-2,6-difluorophenyl]-2-ethoxyacetamide hydrochloride 701269-15-0P,
 2-[3-(2-Benzyloxyethoxy)-2,6-difluorophenyl]-N-(4-carbamimidoylbenzyl)-2-ethoxyacetamide hydrochloride 701269-16-1P,
 N-(4-Carbamididoylbenzyl)-2-[2,6-difluoro-3-(2-hydroxyethoxy)phenyl]-2-ethoxyacetamide hydrochloride 701269-19-4P,
 N-(4-Carbamididoylbenzyl)-2-(2,6-difluoro-3-phenoxyphenyl)-2-ethoxyacetamide acetate 701269-20-7P,
 N-(4-Carbamididoylbenzyl)-2-(2,4-difluorobiphenyl-3-yl)-2-ethoxyacetamide

hydrochloride 701269-29-6P, N-(4-Carbamidoylbenzyl)-2-(2,6-difluoro-3-phenylaminophenyl)-2-methoxyacetamide acetate 701269-32-1P, N-(4-Carbamidoylbenzyl)-2-(2,6-difluoro-3-isopropylaminophenyl)-2-methoxyacetamide acetate 701269-33-2P, 2-(3-Acetylamino-2,6-difluorophenyl)-N-(4-carbamidoylbenzyl)-2-methoxyacetamide hydrochloride 701269-34-3P, N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-3-[(phenylacetyl)amino]phenyl]-2-methoxyacetamide hydrochloride 701269-39-8P, N-(4-Carbamidoylbenzyl)-2-(2,6-difluoro-3-hydroxymethylphenyl)-2-ethoxyacetamide hydrochloride 701269-44-5P, 2-[3-[(Acetylamino)methyl]-2,6-difluorophenyl]-N-(4-carbamidoylbenzyl)-2-ethoxyacetamide hydrochloride 701269-47-8P, 2-(3-Aminomethyl-2,6-difluorophenyl)-N-(4-carbamidoylbenzyl)-2-ethoxyacetamide acetate 701269-49-0P, N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-3-[(phenylamino)methyl]phenyl]-2-ethoxyacetamide hydrochloride 701269-50-3P, N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-3-[(morpholin-4-yl)methyl]phenyl]-2-ethoxyacetamide hydrochloride 701269-51-4P, N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-3-[(piperidin-1-yl)methyl]phenyl]-2-ethoxyacetamide hydrochloride 701269-54-7P, N-(4-Carbamidoylbenzyl)-2-(2,6-difluoro-3-formylphenyl)-2-ethoxyacetamide acetate 701269-57-0P, N-(4-Carbamidoyl-2,6-difluorobenzyl)-2-(2,6-difluoro-4-methoxyphenyl)-2-ethoxyacetamide hydrochloride 701269-59-2P, N-(4-Carbamidoyl-2,6-difluorobenzyl)-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide acetate 701269-61-6P, N-(4-Carbamidoyl-2,6-difluorobenzyl)-2-(2,6-difluoro-4-methoxyphenyl)-2-methoxyacetamide acetate 701269-63-8P, N-(4-Carbamidoyl-2,6-difluorobenzyl)-2-(2-fluoro-4-methoxyphenyl)-2-methoxyacetamide acetate 701269-69-4P, N-[4-Carbamidoyl-2-[(carbamoylmethyl)amino]benzyl]-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide hydrochloride 701269-71-8P, N-(2-Benzylamino-4-carbamidoylbenzyl)-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide acetate 701269-72-9P, N-[4-Carbamidoyl-2-(2-fluorobenzylamino)benzyl]-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide hydrochloride 701269-73-0P, N-[4-Carbamidoyl-2-[(pyridin-2-ylmethyl)amino]benzyl]-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide hydrochloride 701269-74-1P, N-[4-Carbamidoyl-2-(4-chloro-2-fluorobenzylamino)benzyl]-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide hydrochloride 701269-75-2P, N-(4-Carbamidoyl-2-phenethylaminobenzyl)-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide hydrochloride 701269-78-5P, [[5-Carbamidoyl-2-[[[2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetyl]amino]methyl]phenyl]amino]acetic acid acetate 701269-80-9P, N-[4-Carbamidoyl-2-[(phenylmethylsulfonyl)amino]benzyl]-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide hydrochloride 701269-82-1P, N-[2-(3-Benzylureido)-4-carbamidoylbenzyl]-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide acetate 701269-83-2P, [5-Carbamidoyl-2-[[[2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetyl]amino]methyl]phenyl]carbamic acid benzyl ester hydrochloride 701269-85-4P, N-(4-Carbamidoyl-2-phenylaminobenzyl)-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide hydrochloride 701269-89-8P, 2-[4-(6-Aminopyridin-3-yl)-2,6-difluorophenyl]-N-[4-carbamidoyl-2-(carbamoylmethoxy)benzyl]-2-ethoxyacetamide hydrochloride 701269-92-3P, N-[4-Carbamidoyl-2-(carbamoylmethoxy)benzyl]-2-[2,6-difluoro-4-[(pyridin-2-yl)methoxy]phenyl]-2-ethoxyacetamide hydrochloride 701269-96-7P, 2-[4-(6-Aminopyridin-3-yl)-2,6-difluorophenyl]-N-(4-carbamidoyl-2,6-difluorobenzyl)-2-ethoxyacetamide acetate 701270-01-1P, (S)-N-(4-Carbamidoylbenzyl)-2-(2,6-difluoro-4-methoxyphenyl)-2-methoxyethanamide formate 701270-04-4P 701270-09-9P, (R)-N-(4-Carbamidoylbenzyl)-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)ethanamide acetate 701270-10-2P,

[Amino[4-[[[2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetyl]amino[methyl]phenyl]methylene]carbamic acid benzyl ester 701270-11-3P, [[4-[[[2-(2,6-Difluoro-4-methoxyphenyl)-2-methoxyacetyl]amino[methyl]phenyl]imino]methyl]carbamic acid benzyl ester 701270-18-0P, N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-4-(1-oxopyridin-4-yl)phenyl]-2-methoxyacetamide hydrochloride 701270-21-5P, N-(4-Carbamidoylbenzyl)-2-[2,6-difluoro-4-(tetrahydropyran-4-yl)phenyl]-2-ethoxyacetamide acetate 701270-23-7P, N-(4-Carbamidoylbenzyl)-2-(4-cyclohexyl-2,6-difluorophenyl)-2-ethoxyacetamide acetate
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(anticoagulant; preparation of N-(carbamidoylbenzyl)benzeneacetamides and pyridineacetamides as coagulation factor inhibitors)

IT 701263-56-1P, N-(4-Carbamidoylbenzyl)-2-(2-fluoro-4-methoxyphenyl)-2-methoxyacetamide hydrochloride 701263-57-2P, [Amino[4-[[[2-(2-fluoro-4-methoxyphenyl)-2-methoxyacetyl]amino[methyl]phenyl]methylene]carbamic acid ethyl ester 701263-58-3P, 2-(2-Fluoro-4-methoxyphenyl)-N-[4-(N-hydroxycarbamidoyl)benzyl]-2-methoxyacetamide 701264-58-6P, N-(4-Carbamidoylbenzyl)-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide hydrochloride

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (intermediate, anticoagulant; preparation of N-(carbamidoylbenzyl)benzeneacetamides and pyridineacetamides as coagulation factor inhibitors)

IT 701272-58-4P
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
 (intermediate; preparation of N-(carbamidoylbenzyl)benzeneacetamides and pyridineacetamides as coagulation factor inhibitors)

IT 701270-06-6P, (R)-Ethoxy(2-fluoro-4-methoxyphenyl)ethanoic acid ethyl ester 701272-60-8P 701272-62-0P
 RL: PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (intermediate; preparation of N-(carbamidoylbenzyl)benzeneacetamides and pyridineacetamides as coagulation factor inhibitors)

IT 7472-67-5P, 2-Methoxy-2-phenylpropionic acid 35599-96-3P, (2-Chlorophenyl)(methoxy)acetic acid 42164-79-4P, Hydroxy(3-nitrophenyl)acetic acid 59769-10-7P, 2-Methoxy-2-(pyridin-2-yl)acetic acid 90178-72-6P, 4-Formyl-3-phenoxybenzotrile 90536-45-1P, (4-Hydroxyphenyl)(methoxy)acetic acid 91004-43-2P, Methoxy(3-nitrophenyl)acetic acid 93555-01-2P, (3-Nitrophenyl)trimethylsilyloxyacetone 103441-02-7P, (2-Fluorophenyl)(methoxy)acetic acid 200571-27-3P, Methoxy(3-nitrophenyl)acetic acid methyl ester 207454-14-6P, (4-Dimethylaminophenyl)(methoxy)acetic acid 504414-32-8P, 4-Benzoyloxy-2-fluorobenzaldehyde 537013-51-7P, 4-Bromo-2,6-difluorobenzaldehyde 701263-27-6P, (S)-N-(4-Cyanobenzyl)- α -methoxybenzeneethanamide 701263-29-8P, (R)-N-(4-Cyanobenzyl)- α -methoxybenzeneethanamide 701263-32-3P, (4-Benzoyloxyphenyl)(methoxy)acetic acid 701263-33-4P, 2-(4-Benzoyloxyphenyl)-N-(4-cyanobenzyl)-2-methoxyacetamide 701263-35-6P, Methoxy(4-phenoxyphenyl)acetic acid 701263-36-7P, N-(4-Cyanobenzyl)-2-methoxy-2-(4-phenoxyphenyl)acetamide 701263-38-9P, N-(4-Cyanobenzyl)-2-methoxy-2-(3-phenoxyphenyl)acetamide 701263-40-3P 701263-42-5P, N-(4-Cyanobenzyl)-2-(2-fluorophenyl)-2-methoxyacetamide 701263-51-6P, [5-Ethoxy-2-fluoro-3-(1-methylpiperidin-4-

yloxy)phenyl](methoxy)acetic acid 701263-52-7P,
 N-(4-Cyanobenzyl)-2-[5-ethoxy-2-fluoro-3-[(1-methylpiperidin-4-yl)oxy]phenyl]-2-methoxyacetamide 701263-54-9P,
 (2-Fluoro-4-methoxyphenyl)(methoxy)acetic acid 701263-55-0P,
 N-(4-Cyanobenzyl)-2-(2-fluoro-4-methoxyphenyl)-2-methoxyacetamide 701263-60-7P, (3-Hydroxy-4-methoxyphenyl)(methoxy)acetic acid 701263-61-8P, [5-[(4-Cyanobenzylcarbamoyl)(methoxy)methyl]-2-methoxyphenoxy]acetic acid ethyl ester 701263-64-1P,
 Ethoxy(3-hydroxy-4-methoxyphenyl)acetic acid 701263-65-2P,
 [5-[(4-Cyanobenzylcarbamoyl)(ethoxy)methyl]-2-methoxyphenoxy]acetic acid ethyl ester 701263-69-6P, N-(4-Cyanobenzyl)-2-(4-hydroxyphenyl)-2-methoxyacetamide 701263-70-9P, N-(4-Cyanobenzyl)-2-(4-ethoxyphenyl)-2-methoxyacetamide 701263-72-1P, N-(4-Cyanobenzyl)-2-methoxy-2-[4-[(1-methylpiperidin-4-yl)oxy]phenyl]acetamide 701263-75-4P,
 (2-Fluoro-4,5-dimethoxyphenyl)(methoxy)acetic acid 701263-76-5P,
 N-(4-Cyanobenzyl)-2-(2-fluoro-4,5-dimethoxyphenyl)-2-methoxyacetamide 701263-79-8P, N-(4-Cyanobenzyl)-2-(3-isopropoxyphenyl)-2-methoxyacetamide 701263-83-4P, N-(4-Cyanobenzyl)-2-(4-isopropoxyphenyl)-2-methoxyacetamide 701263-85-6P, [4-[(4-Cyanobenzylcarbamoyl)(methoxy)methyl]phenoxy]acetic acid ethyl ester 701263-90-3P, (3,5-Diethoxy-2-fluorophenyl)(methoxy)acetic acid 701263-91-4P,
 N-(4-Cyanobenzyl)-2-(3,5-diethoxy-2-fluorophenyl)-2-methoxyacetamide 701263-93-6P, [5-Ethoxy-2-fluoro-4-(2-hydroxyethoxy)phenyl](methoxy)acetic acid 701263-94-7P, N-(4-Cyanobenzyl)-2-[5-ethoxy-2-fluoro-4-(2-hydroxyethoxy)phenyl]-2-methoxyacetamide 701263-97-0P,
 (3,4-Diethoxy-2-fluorophenyl)(methoxy)acetic acid 701263-98-1P,
 N-(4-Cyanobenzyl)-2-(3,4-diethoxy-2-fluorophenyl)-2-methoxyacetamide 701264-00-8P, 4-Aminomethyl-3-fluorobenzonitrile 701264-01-9P,
 N-(4-Cyano-2-fluorobenzyl)-2-(2-fluoro-4-methoxyphenyl)-2-methoxyacetamide 701264-03-1P, N-(4-Cyano-3-fluorobenzyl)-2-(2-fluoro-4-methoxyphenyl)-2-methoxyacetamide 701264-06-4P, (2-Benzyloxy-4-methoxyphenyl)(methoxy)acetic acid 701264-07-5P,
 (2-Hydroxy-4-methoxyphenyl)(methoxy)acetic acid 701264-08-6P,
 N-(4-Cyanobenzyl)-2-(2-hydroxy-4-methoxyphenyl)-2-methoxyacetamide 701264-09-7P, N-[4-(N-Hydroxycarbamimidoyl)benzyl]-2-(2-hydroxy-4-methoxyphenyl)-2-methoxyacetamide 701264-16-6P,
 2-(4-Bromo-2-fluorophenyl)-N-(4-cyanobenzyl)-2-ethoxyacetamide 701264-18-8P, 2-(4-Bromo-2-fluorophenyl)-N-(4-cyanobenzyl)-2-propoxyacetamide 701264-21-3P, N-(4-Cyanobenzyl)-2-[4-(2-hydroxyethoxy)phenyl]-2-methoxyacetamide 701264-23-5P,
 N-(4-Cyanobenzyl)-2-(4-dimethylaminophenyl)-2-methoxyacetamide 701264-26-8P, N-(4-Cyanobenzyl)-2-methoxy-2-[4-(pyrrolidin-1-yl)phenyl]acetamide 701264-28-0P,
 2-(2-Chlorophenyl)-N-(4-cyanobenzyl)-2-methoxyacetamide 701264-30-4P, (4-Acetylaminophenyl)(methoxy)acetic acid 701264-31-5P,
 2-(4-Acetylaminophenyl)-N-(4-cyanobenzyl)-2-methoxyacetamide 701264-33-7P, Methoxy(4-trifluoromethoxyphenyl)acetic acid 701264-34-8P, N-(4-Cyanobenzyl)-2-methoxy-2-(4-trifluoromethoxyphenyl)acetamide 701264-36-0P, N-(4-Cyanobenzyl)-2-[4-(imidazol-1-yl)phenyl]-2-methoxyacetamide 701264-38-2P, Methoxy(6-methoxynaphthalen-2-yl)acetic acid 701264-39-3P, N-(4-Cyanobenzyl)-2-methoxy-2-(6-methoxynaphthalen-2-yl)acetamide 701264-41-7P, N-(4-Cyanobenzyl)-2-methoxy-2-[4-(morpholin-4-yl)phenyl]acetamide 701264-44-0P,
 N-(4-Cyanobenzyl)-2-[4-(3-dimethylaminopropoxy)phenyl]-2-methoxyacetamide 701264-47-3P, N-(4-Cyanobenzyl)-2-(4'-dimethylamino-3-fluorobiphenyl-4-yl)-2-methoxyacetamide 701264-53-1P,
 (2,2-Dimethylchroman-6-yl)(methoxy)acetic acid 701264-54-2P,
 N-(4-Cyanobenzyl)-2-(2,2-dimethylchroman-6-yl)-2-methoxyacetamide 701264-56-4P, Ethoxy(2-fluoro-4-methoxyphenyl)acetic acid 701264-57-5P,
 N-(4-Cyanobenzyl)-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide 701264-60-0P, (3-Cyclopentyl-4-methoxyphenyl)(methoxy)acetic acid 701264-62-2P, (2-Chloro-4-methoxyphenyl)(methoxy)acetic acid

701264-63-3P, 2-(2-Chloro-4-methoxyphenyl)-N-(4-cyanobenzyl)-2-methoxyacetamide 701264-65-5P, (2,6-Difluoro-4-methoxyphenyl)(methoxy)acetic acid 701264-66-6P, N-(4-Cyanobenzyl)-2-(2,6-difluoro-4-methoxyphenyl)-2-methoxyacetamide 701264-68-8P, N-(4-Cyanobenzyl)-2-(2-fluoro-4-methoxyphenyl)-2-propoxyacetamide 701264-70-2P, N-(4-Cyanobenzyl)-2-methoxy-2-(naphthalen-1-yl)propionamide 701264-72-4P, 2-(4-Bromo-2,6-difluorophenyl)-N-(4-cyanobenzyl)-2-methoxyacetamide 701264-74-6P, (4-Benzoyloxy-2-fluorophenyl)(methoxy)acetic acid 701264-75-7P, (2-Fluoro-4-hydroxyphenyl)(methoxy)acetic acid 701264-76-8P, N-(4-Cyanobenzyl)-2-(2-fluoro-4-hydroxyphenyl)-2-methoxyacetamide 701264-77-9P, N-(4-Cyanobenzyl)-2-(2-fluoro-4-isopropoxyphenyl)-2-methoxyacetamide 701264-79-1P, N-(4-Cyanobenzyl)-2-(2-fluoro-4-isobutoxyphenyl)-2-methoxyacetamide 701264-81-5P, N-(4-Cyanobenzyl)-2-[2-fluoro-4-[(2-(4-fluorophenyl)ethoxy)phenyl]-2-methoxyacetamide 701264-83-7P, N-(4-Cyanobenzyl)-2-[2-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl]-2-methoxyacetamide 701264-84-8P, N-(4-Cyanobenzyl)-2-[2-fluoro-4-(pyridin-3-yl)phenyl]-2-methoxyacetamide 701264-86-0P, N-(4-Cyanobenzyl)-2-[2-fluoro-4-(pyridin-4-yl)phenyl]-2-methoxyacetamide 701264-88-2P, (5-Bromo-2-fluorophenyl)(methoxy)acetic acid 701264-89-3P, 2-(5-Bromo-2-fluorophenyl)-N-(4-cyanobenzyl)-2-methoxyacetamide 701264-91-7P, N-(4-Cyanobenzyl)-2-(4-fluorobiphenyl-3-yl)-2-methoxyacetamide 701264-93-9P, (2-Fluoro-5-methylphenyl)(methoxy)acetic acid 701264-94-0P, N-(4-Cyanobenzyl)-2-(2-fluoro-5-methylphenyl)-2-methoxyacetamide 701264-96-2P, (2-Fluoro-5-trifluoromethylphenyl)(methoxy)acetic acid 701264-97-3P, N-(4-Cyanobenzyl)-2-(2-fluoro-5-trifluoromethylphenyl)-2-methoxyacetamide 701264-99-5P, (2-Fluoro-6-methoxyphenyl)(methoxy)acetic acid 701265-00-1P, N-(4-Cyanobenzyl)-2-(2-fluoro-6-methoxyphenyl)-2-methoxyacetamide 701265-03-4P, 2-Benzoyloxy-6-fluorobenzaldehyde 701265-04-5P, (2-Benzoyloxy-6-fluorophenyl)(methoxy)acetic acid 701265-05-6P, (2-Fluoro-6-hydroxyphenyl)(methoxy)acetic acid 701265-06-7P, N-(4-Cyanobenzyl)-2-(2-fluoro-6-hydroxyphenyl)-2-methoxyacetamide 701265-07-8P 701265-08-9P 701265-10-3P 701265-12-5P 701265-14-7P 701265-16-9P 701265-18-1P, [(4-Cyanobenzylcarbamoyl)phenylmethyl]carbamic acid tert-butyl ester 701265-20-5P 701265-21-6P 701265-22-7P, N-(4-Cyanobenzyl)-2-[2-fluoro-4-(2-phenoxyethoxy)phenyl]-2-methoxyacetamide 701265-24-9P, N-(4-Cyanobenzyl)-2-methoxy-2-(pyridin-2-yl)acetamide 701265-26-1P, N-(4-Cyanobenzyl)-2-methoxy-2-phenylpropionamide 701265-29-4P, N-(4-Cyanobenzyl)-2-[2-fluoro-6-(2-hydroxyethoxy)phenyl]-2-methoxyacetamide 701265-31-8P, 2-[2-(Carbamoylmethoxy)-6-fluorophenyl]-N-(4-cyanobenzyl)-2-methoxyacetamide 701265-33-0P, 2-(Biphenyl-4-yl)-2-ethoxypropionic acid ethyl ester 701265-34-1P, 2-(Biphenyl-4-yl)-2-ethoxypropionic acid 701265-35-2P, 2-(Biphenyl-4-yl)-N-(4-cyanobenzyl)-2-ethoxypropionamide 701265-38-5P, 4-[3-[(Carboxymethoxymethyl)-5-ethoxy-2-fluorophenoxy]piperidine-1-carboxylic acid tert-butyl ester 701265-39-6P, 4-[3-[(4-Cyanobenzylcarbamoyl)(methoxy)methyl]-5-ethoxy-2-fluorophenoxy]piperidine-1-carboxylic acid tert-butyl ester 701265-40-9P, N-(4-Cyanobenzyl)-2-[5-ethoxy-2-fluoro-3-[(piperidin-4-yl)oxy]phenyl]-2-methoxyacetamide 701265-41-0P, 2-[3-[1-(Benzenesulfonyl)piperidin-4-yloxy]-5-ethoxy-2-fluorophenyl]-N-(4-cyanobenzyl)-2-methoxyacetamide 701265-46-5P, N-(2-Chloro-4-cyanobenzyl)-2-(2-fluoro-4-methoxyphenyl)-2-methoxyacetamide 701265-48-7P, N-(2-Chloro-4-cyanobenzyl)-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide 701265-50-1P, (2,6-Difluoro-4-methoxyphenyl)(hydroxy)acetic acid ethyl ester 701265-51-2P, (2,6-Difluoro-4-methoxyphenyl)(ethoxy)acetic acid ethyl ester 701265-52-3P, (2,6-Difluoro-4-methoxyphenyl)(ethoxy)acetic acid

701265-53-4P, N-(2-Chloro-4-cyanobenzyl)-2-(2,6-difluoro-4-methoxyphenyl)-2-ethoxyacetamide 701265-55-6P, N-(2-Chloro-4-cyanobenzyl)-2-(2,6-difluoro-4-methoxyphenyl)-2-methoxyacetamide 701265-57-8P, N-(3-Chloro-4-cyanobenzyl)-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide 701265-58-9P, N-[3-Chloro-4-(N-hydroxycarbamidoyl)benzyl]-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide 701265-62-5P, N-(4-Cyano-2-methoxybenzyl)-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide 701265-64-7P, 4-[(Hydroxyimino)methyl]-3-phenoxybenzonitrile 701265-65-8P 701265-66-9P, N-(4-Cyano-2-phenoxybenzyl)-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide 701265-72-7P, 3-Hydroxy-4-[(hydroxyimino)methyl]benzonitrile 701265-73-8P, 4-Aminomethyl-3-hydroxybenzonitrile hydrochloride 701265-74-9P, N-(4-Cyano-2-hydroxybenzyl)-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide 701265-75-0P, N-[4-Cyano-2-(5-nitropyridin-2-yloxy)benzyl]-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide 701265-78-3P 701265-79-4P, N-(5-Cyanobiphenyl-2-ylmethyl)-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide 701265-81-8P, [5-Cyano-2-[[[2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetyl]amino]methyl]phenoxy]acetic acid ethyl ester 701265-92-1P, [2-(Carbamoylmethoxy)-4-cyanobenzyl]carbamic acid tert-butyl ester 701265-93-2P, 2-(2-Aminomethyl-5-cyanophenoxy)acetamide hydrochloride 701265-95-4P, N-(4-Cyano-2-phenoxybenzyl)-2-(2,6-difluoro-4-methoxyphenyl)-2-ethoxyacetamide 701265-97-6P, 4-[[[3-(2,6-Difluoro-4-methoxyphenyl)-3-ethoxy-2-oxopropyl]amino]-3-methoxybenzonitrile 701265-99-8P, N-(4-Cyano-2-hydroxybenzyl)-2-(2,6-difluoro-4-methoxyphenyl)-2-ethoxyacetamide 701266-00-4P, N-[2-(Carbamoylmethoxy)-4-cyanobenzyl]-2-(2,6-difluoro-4-methoxyphenyl)-2-ethoxyacetamide 701266-10-6P 701266-12-8P 701266-15-1P, N-(4-Cyano-2-hydroxybenzyl)-2-(2,6-difluoro-4-methoxyphenyl)-2-methoxyacetamide 701266-16-2P, N-[4-Cyano-2-[(methylcarbamoyl)methoxy]benzyl]-2-(2,6-difluoro-4-methoxyphenyl)-2-methoxyacetamide 701266-21-9P, N-[4-Cyano-2-(2,2,2-trifluoroethoxy)benzyl]-2-(2,6-difluoro-4-methoxyphenyl)-2-methoxyacetamide 701266-25-3P, tert-Butyl(3,5-difluorophenoxy)diphenylsilane 701266-26-4P, [4-(tert-Butyldiphenylsilyloxy)-2,6-difluorophenyl](hydroxy)acetic acid ethyl ester 701266-27-5P, [4-(tert-Butyldiphenylsilyloxy)-2,6-difluorophenyl](ethoxy)acetic acid ethyl ester 701266-28-6P, (2,6-Difluoro-4-hydroxyphenyl)(ethoxy)acetic acid 701266-29-7P, [[4-[[[2-(2,6-Difluoro-4-hydroxyphenyl)-2-ethoxyacetyl]amino]methyl]phenyl](imino)methyl]carbamic acid benzyl ester 701266-30-0P, (2,6-Difluoro-4-hydroxyphenyl)(ethoxy)acetic acid ethyl ester 701266-32-2P, [[4-[[[2-(2,6-Difluoro-4-[(morpholin-4-yl)ethoxy]phenyl)-2-ethoxyacetyl]amino]methyl]phenyl](imino)methyl]carbamic acid benzyl ester 701266-37-7P, [2,6-Difluoro-4-(4-methoxyphenoxy)phenyl](ethoxy)acetic acid ethyl ester 701266-38-8P, [2,6-Difluoro-4-(4-methoxyphenoxy)phenyl](ethoxy)acetic acid 701266-39-9P, [[4-[[[2-(2,6-Difluoro-4-(4-methoxyphenoxy)phenyl)-2-ethoxyacetyl]amino]methyl]phenyl](imino)methyl]carbamic acid benzyl ester 701266-41-3P, [4-(3,4-Dimethoxyphenoxy)-2,6-difluorophenyl](ethoxy)acetic acid 701266-42-4P, [[4-[[[2-(4-(3,4-Dimethoxyphenoxy)-2,6-difluorophenyl)-2-ethoxyacetyl]amino]methyl]phenyl](imino)methyl]carbamic acid benzyl ester 701266-44-6P, [2,6-Difluoro-4-(3-methoxyphenoxy)phenyl](ethoxy)acetic acid ethyl ester 701266-45-7P, [2,6-Difluoro-4-(3-methoxyphenoxy)phenyl](ethoxy)acetic acid 701266-46-8P, [[4-[[[2-(2,6-Difluoro-4-(3-methoxyphenoxy)phenyl)-2-ethoxyacetyl]amino]methyl]phenyl](imino)methyl]carbamic acid benzyl ester 701266-48-0P, [4-(3-Acetylaminophenoxy)-2,6-difluorophenyl](ethoxy)acetic acid ethyl ester 701266-49-1P, [4-(3-Acetylaminophenoxy)-2,6-difluorophenyl](ethoxy)acetic acid 701266-50-4P, [[4-[[[2-(4-(3-Acetylaminophenoxy)-2,6-difluorophenyl)-2-ethoxyacetyl]amino]methyl]phenyl](imino)methyl]carbamic acid benzyl ester

701266-52-6P, [4-(4-Cyanophenoxy)-2,6-difluorophenyl](ethoxy)acetic acid
 701266-53-7P, [[4-[[[2-(4-(4-Cyanophenoxy)-2,6-difluorophenyl]-2-ethoxyacetyl)amino]methyl]phenyl](imino)methyl]carbamic acid benzyl ester
 701266-55-9P, [2,6-Difluoro-4-(3-trifluoromethoxyphenoxy)phenyl](ethoxy)acetic acid ethyl ester
 701266-56-0P, [2,6-Difluoro-4-(3-trifluoromethoxyphenoxy)phenyl](ethoxy)acetic acid 701266-57-1P, [[4-[[[2-(2,6-Difluoro-4-(3-trifluoromethoxyphenoxy)phenyl]-2-ethoxyacetyl)amino]methyl]phenyl](imino)methyl]carbamic acid benzyl ester
 701266-59-3P, [2,6-Difluoro-4-[(trifluoromethanesulfonyl)oxy]phenyl](ethoxy)acetic acid ethyl ester
 701266-60-6P, 4-[(2-Ethoxyethoxycarbonyl)methyl]-3,5-difluorobenzoic acid
 2-(trimethylsilyl)ethyl ester 701266-61-7P, 4-[(2-Ethoxyethoxycarbonyl)methyl]-3,5-difluorobenzoic acid
 701266-62-8P, [2,6-Difluoro-4-(isobutylcarbamoylethyl)phenyl](ethoxy)acetic acid ethyl ester 701266-63-9P, [2,6-Difluoro-4-(isobutylcarbamoylethyl)phenyl](ethoxy)acetic acid 701266-64-0P, [[4-[[[2-(2,6-Difluoro-4-(isobutylcarbamoylethyl)phenyl]-2-ethoxyacetyl)amino]methyl]phenyl](imino)methyl]carbamic acid benzyl ester
 701266-71-9P, tert-Butyl(2,4-difluorophenoxy)diphenylsilane
 701266-72-0P, [3-(tert-Butyldiphenylsilyloxy)-2,6-difluorophenyl](hydroxy)acetic acid ethyl ester 701266-73-1P, [3-(tert-Butyldiphenylsilyloxy)-2,6-difluorophenyl](ethoxy)acetic acid ethyl ester 701266-74-2P, (2,6-Difluoro-3-hydroxyphenyl)(ethoxy)acetic acid 701266-75-3P, (2,6-Difluoro-3-hydroxyphenyl)(ethoxy)acetic acid ethyl ester 701266-76-4P, [[4-[[[2-(2,6-Difluoro-3-hydroxyphenyl)-2-ethoxyacetyl]amino]methyl]phenyl](imino)methyl]carbamic acid benzyl ester
 701267-11-0P, [2,6-Difluoro-3-(4-fluorophenoxy)phenyl](ethoxy)acetic acid ethyl ester 701267-13-2P, [2,6-Difluoro-3-(4-fluorophenoxy)phenyl](ethoxy)acetic acid 701267-14-3P 701267-20-1P, N-(4-Cyanobenzyl)-2-(2,6-difluoro-3-hydroxyphenyl)-2-ethoxyacetamide
 701267-21-2P, N-(4-Cyanobenzyl)-2-ethoxy-2-[3-(1-ethoxypropoxy)-2,6-difluorophenyl]acetamide 701267-28-9P, Trifluoromethanesulfonic acid 3-[[4-(cyanobenzylcarbamoylethyl)(ethoxy)methyl]-2,4-difluorophenyl] ester
 701267-29-0P, N-(4-Cyanobenzyl)-2-[2,6-difluoro-3-(pyridin-2-yl)phenyl]-2-ethoxyacetamide 701267-30-3P, 2-[2,6-Difluoro-3-(pyridin-2-yl)phenyl]-2-ethoxy-N-[4-(N-hydroxycarbamidoyl)benzyl]acetamide 701267-37-0P, [3-(tert-Butyldiphenylsilyloxy)-2,6-difluorophenyl](methoxy)acetic acid ethyl ester 701267-39-2P, (2,6-Difluoro-3-hydroxyphenyl)(methoxy)acetic acid ethyl ester 701267-40-5P, (2,6-Difluoro-3-hydroxyphenyl)(methoxy)acetic acid 701267-41-6P, N-(4-Cyanobenzyl)-2-(2,6-difluoro-3-hydroxyphenyl)-2-methoxyacetamide
 701267-42-7P, Trifluoromethanesulfonic acid 3-[[4-(cyanobenzylcarbamoylethyl)(methoxy)methyl]-2,4-difluorophenyl] ester
 701267-51-8P, 3-[[4-(4-Cyanobenzylcarbamoylethyl)(methoxy)methyl]-2,4-difluorobenzoic acid methyl ester 701267-52-9P, 3-[[4-(4-Cyanobenzylcarbamoylethyl)(methoxy)methyl]-2,4-difluorobenzoic acid
 701267-53-0P, 2-[2,6-Difluoro-3-[(morpholin-4-yl)carbonyl]phenyl]-N-[4-(N-hydroxycarbamidoyl)benzyl]-2-methoxyacetamide 701267-71-2P, N-(4-Cyanobenzyl)-2-[2,6-difluoro-3-(4-fluorophenoxy)phenyl]-2-methoxyacetamide 701267-72-3P, 2-[2,6-Difluoro-3-(4-fluorophenoxy)phenyl]-N-[4-(N-hydroxycarbamidoyl)benzyl]-2-methoxyacetamide 701267-75-6P, N-(4-Cyanobenzyl)-2-(3,5-difluorobiphenyl-4-yl)-2-methoxyacetamide 701267-77-8P, N-(4-Cyanobenzyl)-2-(3,5-difluorobiphenyl-4-yl)-2-ethoxyacetamide
 701267-82-5P, N-(4-Cyanobenzyl)-2-[2,6-difluoro-4-(furan-2-yl)phenyl]-2-ethoxyacetamide 701267-83-6P, 2-[2,6-Difluoro-4-(furan-2-yl)phenyl]-2-ethoxy-N-[4-(N-hydroxycarbamidoyl)benzyl]acetamide 701267-89-2P, [[4'-[[4-(4-Cyanobenzylcarbamoylethyl)(ethoxy)methyl]-3',5'-difluorobiphenyl-3-yl]oxy]acetic acid ethyl ester 701267-91-6P, [[4'-[[4-(4-Carbamidoyl)benzylcarbamoylethyl](ethoxy)methyl]-3',5'-difluorobiphenyl-3-yl]oxy]acetic acid ethyl ester hydrochloride

701268-01-1P, N-(4-Cyanobenzyl)-2-(3,5-difluoro-2'-hydroxybiphenyl-4-yl)-2-ethoxyacetamide 701268-03-3P, 2-[2'-(2-Benzyloxyethoxy)-3,5-difluorobiphenyl-4-yl]-N-(4-cyanobenzyl)-2-ethoxyacetamide 701268-08-8P, N-(4-Cyanobenzyl)-2-[2'-(2-dimethylaminoethoxy)-3,5-difluorobiphenyl-4-yl]-2-ethoxyacetamide 701268-18-0P
2-[2'-(Carbamoylmethoxy)-3,5-difluorobiphenyl-4-yl]-2-ethoxy-N-[4-(N-hydroxycarbamidoyl)benzyl]acetamide 701268-23-7P, N-(4-Cyanobenzyl)-2-[2,6-difluoro-4-(4,4,5,5-tetramethyl-1,1,3,2)dioxaborolan-2-yl]phenyl]-2-ethoxyacetamide 701268-25-9P, N-(4-Cyanobenzyl)-2-[2,6-difluoro-4-(pyridin-4-yl)phenyl]-2-ethoxyacetamide 701268-48-6P, [Amino[4-[[[2-[4-(6-aminopyridin-3-yl)-2,6-difluorophenyl]-2-ethoxyacetyl]amino]methyl]phenyl]phenyl]ethylethylcarbamate acid ester 701268-52-2P, N-(4-Cyanobenzyl)-2-(3,5-difluoro-2'-formylbiphenyl-4-yl)-2-ethoxyacetamide 701268-54-4P, N-(4-Cyanobenzyl)-2-(3,5-difluoro-2'-hydroxymethylbiphenyl-4-yl)-2-ethoxyacetamide 701268-59-9P, 2-[3,5-Difluoro-2'-[hydroxy(imino)methyl]biphenyl-4-yl]-2-ethoxy-N-[4-(N-hydroxycarbamidoyl)benzyl]acetamide 701268-62-4P, 3-Benzyloxy-2-fluoro-4-methoxybenzaldehyde 701268-63-5P, (3-Benzyloxy-2-fluoro-4-methoxyphenyl)(methoxy)acetic acid 701268-65-7P, N-(4-Cyanobenzyl)-2-(2-fluoro-3-hydroxy-4-methoxyphenyl)-2-methoxyacetamide 701268-67-9P, N-(4-Cyanobenzyl)-2-(2-fluoro-4-methoxy-3-phenoxyphenyl)-2-methoxyacetamide 701268-72-6P, Trifluoromethanesulfonic acid 2-[(4-cyanobenzylcarbamoyl)(methoxy)methyl]-3-fluorophenyl ester 701268-74-8P, N-(4-Cyanobenzyl)-2-[2-fluoro-6-[(trimethylsilyl)ethyl]phenyl]-2-methoxyacetamide 701268-77-1P, N-(4-Cyanobenzyl)-2-[2-fluoro-6-[3-(1-tetrahydropyran-2-yl)oxy]prop-1-ynyl]phenyl]-2-methoxyacetamide 701268-80-6P, N-(4-Cyanobenzyl)-2-(3-fluorobiphenyl-2-yl)-2-methoxyacetamide 701268-86-2P, [2-[(4-Cyanobenzylcarbamoyl)(methoxy)methyl]-3-fluorophenoxy]acetic acid methyl ester 701268-92-0P, (4-Benzyloxy-2,6-difluorophenyl)(ethoxy)acetic acid 701268-93-1P, 2-(4-Benzyloxy-2,6-difluorophenyl)-N-(4-cyanobenzyl)-2-ethoxyacetamide 701268-95-3P, N-(4-Cyanobenzyl)-2-(2,6-difluoro-4-hydroxyphenyl)-2-ethoxyacetamide 701268-97-5P, N-(4-Cyanobenzyl)-2-(2,6-difluoro-4-isopropoxyphenyl)-2-ethoxyacetamide 701269-10-5P, N-(4-Cyanobenzyl)-2-(2,6-difluoro-4-phenoxyphenyl)-2-ethoxyacetamide
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of N-(carbamimidoylbenzyl)benzeneacetamides and pyridineacetamides as coagulation factor inhibitors)
IT 701269-21-8P, (2,4-Difluorophenyl)carbamate acid tert-butyl ester 701269-22-9P, (2,4-Difluoro-3-formylphenyl)carbamate acid tert-butyl ester 701269-23-0P, [3-[(tert-Butoxycarbonyl)amino]-2,6-difluorophenyl](methoxy)acetic acid 701269-24-1P, [3-[(4-Cyanobenzylcarbamoyl)(methoxy)methyl]-2,4-difluorophenyl]carbamate acid tert-butyl ester 701269-25-2P, 2-(3-Amino-2,6-difluorophenyl)-N-(4-cyanobenzyl)-2-methoxyacetamide 701269-26-3P, N-(4-Cyanobenzyl)-2-(2,6-difluoro-3-phenylaminophenyl)-2-methoxyacetamide 701269-27-4P, 2-(2,6-Difluoro-3-phenylaminophenyl)-N-[4-(N-hydroxycarbamidoyl)benzyl]-2-methoxyacetamide 701269-30-9P, N-(4-Cyanobenzyl)-2-(2,6-difluoro-3-isopropylaminophenyl)-2-methoxyacetamide 701269-35-4P, 2-(2,4-Difluorobiphenyl)-[1,3]dioxolane 701269-36-5P, (2,6-Difluoro-3-formylphenyl)(ethoxy)acetic acid 701269-37-6P, N-(4-Cyanobenzyl)-2-(2,6-difluoro-3-formylphenyl)-2-ethoxyacetamide 701269-38-7P, N-(4-Cyanobenzyl)-2-(2,6-difluoro-3-hydroxymethylphenyl)-2-ethoxyacetamide 701269-40-1P, N-(4-Cyanobenzyl)-2-[2,6-difluoro-3-[hydroxy(imino)methyl]phenyl]-2-ethoxyacetamide 701269-42-3P, 2-(3-Aminomethyl-2,6-difluorophenyl)-N-(4-cyanobenzyl)-2-ethoxyacetamide acetate 701269-43-4P, 2-[3-(1-Acetylaminomethyl)-2,6-difluorophenyl]-N-(4-cyanobenzyl)-2-ethoxyacetamide 701269-45-6P, 2-[2,6-Difluoro-3-

[hydroxy(imino)methyl]phenyl]-2-ethoxy-N-[4-(N-hydroxycarbamimidoyl)benzyl]acetamide 701269-48-9P,
 N-(4-Cyanobenzyl)-2-[2,6-difluoro-3-[(phenylamino)methyl]phenyl]-2-ethoxyacetamide 701269-55-8P, 4-Aminomethyl-3,5-difluorobenzonitrile hydrochloride 701269-56-9P, N-(4-Cyano-2,6-difluorobenzyl)-2-(2,6-difluoro-4-methoxyphenyl)-2-ethoxyacetamide 701269-64-9P 701269-65-0P, 4-Aminomethyl-3-nitrobenzonitrile 701269-66-1P, N-(4-Cyano-2-nitrobenzyl)-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide 701269-67-2P, N-(2-Amino-4-cyanobenzyl)-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide 701269-68-3P, N-[2-[(Carbamoylmethyl)amino]-4-cyanobenzyl]-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide 701269-79-6P, N-[4-Cyano-2-[(phenylmethylsulfonyl)amino]benzyl]-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide 701269-84-3P, N-(4-Cyano-2-phenylaminobenzyl)-2-ethoxy-2-(2-fluoro-4-methoxyphenyl)acetamide 701269-86-5P, [2,6-Difluoro-4-(4,4,5,5-tetramethyl-1,3,2)dioxaborolan-2-yl]phenyl] (ethoxy)acetic acid ethyl ester 701269-87-6P, [4-(6-Aminopyridin-3-yl)-2,6-difluorophenyl] (ethoxy)acetic acid 701269-88-7P, 2-[4-(6-Aminopyridin-3-yl)-2,6-difluorophenyl]-N-[2-(carbamoylmethoxy)-4-cyanobenzyl]-2-ethoxyacetamide 701269-90-1P, [2,6-Difluoro-4-(pyridin-2-ylmethoxy)phenyl] (ethoxy)acetic acid 701269-91-2P, N-[2-(Carbamoylmethoxy)-4-cyanobenzyl]-2-[2,6-difluoro-4-[(pyridin-2-yl)methoxy]phenyl]-2-ethoxyacetamide 701269-93-4P, 2-[4-(6-Aminopyridin-3-yl)-2,6-difluorophenyl]-N-(4-cyano-2,6-difluorobenzyl)-2-ethoxyacetamide 701270-05-5P, Ethoxy(2-fluoro-4-methoxyphenyl)acetic acid ethyl ester 701270-07-7P, (R)-Ethoxy(2-fluoro-4-methoxyphenyl)ethanoic acid 701270-12-4P, (2,6-Difluoro-4-hydroxyphenyl) (methoxy)acetic acid ethyl ester 701270-13-5P, [2,6-Difluoro-4-(4,4,5,5-tetramethyl-1,3,2)dioxaborolan-2-yl]phenyl] (methoxy)acetic acid ethyl ester 701270-14-6P, [2,6-Difluoro-4-(pyridin-4-yl)phenyl] (methoxy)acetic acid ethyl ester 701270-15-7P, [2,6-Difluoro-4-(1-oxopyridin-4-yl)phenyl] (methoxy)acetic acid ethyl ester 701270-16-8P, [2,6-Difluoro-4-(1-oxopyridin-4-yl)phenyl] (methoxy)acetic acid 701270-19-1P, N-(4-Cyanobenzyl)-2-[4-(3,6-dihydro-2H-pyran-4-yl)-2,6-difluorophenyl]-2-ethoxyacetamide 701272-56-2P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; preparation of N-(carbamimidoylbenzyl)benzeneacetamides and pyridineacetamides as coagulation factor inhibitors)

IT 9002-04-4, Thrombin 9002-05-5, Factor Xa 9035-58-9, Tissue factor (blood-coagulation) 14708-95-3D, Factor III, complex with factor VIIa 37316-87-3, Factor IXa 65312-43-8, Factor VIIa 65312-43-8D, Factor VIIa, complex with factor III

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(preparation of N-(carbamimidoylbenzyl)benzeneacetamides and pyridineacetamides as coagulation factor inhibitors)

IT 60-12-8, Phenethyl alcohol 62-53-3, Aniline, reactions 67-36-7, 4-Phenoxybenzaldehyde 75-30-9, 2-Iodopropane 78-81-9, Isobutylamine 78-83-1, reactions 89-98-5, 2-Chlorobenzaldehyde 96-30-0, 2-Chloro-N-methylacetamide 96-41-3, Cyclopentan-97-99-4, Tetrahydrofurfuryl alcohol 98-80-6, Phenylboronic acid 98-86-2, Acetophenone, reactions 99-61-6, 3-Nitrobenzaldehyde 100-10-7, 4-Dimethylaminobenzaldehyde 100-52-7, Benzaldehyde, reactions 100-55-0, 3-(Hydroxymethyl)pyridine 100-97-0, reactions 103-74-2, 2-(2-Hydroxyethyl)pyridine 105-36-2, Ethyl bromoacetate 106-52-5, 4-Hydroxy-N-methylpiperidine 108-01-0, 2-Dimethylaminoethanol 108-93-0, Cyclohexanol, reactions 108-95-2, Phenol, reactions 109-85-3, 2-Methoxyethylamine 109-86-4, 2-Methoxyethanol 109-89-7, Diethylamine, reactions 110-80-5, 2-Ethoxyethanol 110-91-8, Morpholine, reactions 111-90-0, Diethylene glycol monoethyl ether

112-35-6, Triethylene glycol monomethyl ether 120-57-0, Piperonal
 122-85-0, 4-Acetamidobenzaldehyde 122-99-6, 2-Phenoxyethanol 285-67-6,
 Cyclopentene oxide 331-64-6, 2-Fluoro-4-methoxybenzaldehyde 348-27-6,
 2-Fluoro-4-hydroxybenzaldehyde 367-27-1, 2,4-Difluorophenol 437-81-0,
 2,6-Difluorobenzaldehyde 446-52-6, 2-Fluorobenzaldehyde 456-22-4,
 4-Fluorobenzoic acid 461-96-1, 1-Bromo-3,5-difluorobenzene 501-53-1,
 Benzyl chloroformate 513-38-2, 1-Iodo-2-methylpropane 541-41-3, Ethyl
 chloroformate 586-95-8, 4-(Hydroxymethyl)pyridine 586-98-1,
 2-Hydroxymethylpyridine 622-08-2, 2-Benzyloxyethanol 622-40-2,
 N-(2-Hydroxyethyl)morpholine 626-55-1, 3-Bromopyridine 659-28-9,
 4-(Trifluoromethoxy)benzaldehyde 873-74-5, 4-Aminobenzonitrile
 924-44-7 1066-54-2, (Ethylnyl)trimethylsilane 1072-97-5,
 2-Amino-5-bromopyridine 1121-60-4, 2-Pyridinecarboxaldehyde 1204-86-0,
 4-(Morpholino)benzaldehyde 1423-26-3, [3-(Trifluoromethyl)phenyl]boronic
 acid 1484-84-0, 2-Piperidineethanol 1550-35-2,
 2,4-Difluorobenzaldehyde 1583-58-0, 2,4-Difluorobenzoic acid
 1700-37-4, 3-Benzyloxybenzaldehyde 1765-93-1, 4-Fluorobenzeneboronic
 acid 1809-10-5, 3-Bromopentane 1939-99-7, Benzylsulfonyl chloride
 2081-44-9, Tetrahydro-2H-pyran-4-ol 2240-88-2,
 3,3,3-Trifluoro-1-propanol 2516-33-8, Hydroxymethylcyclopropane
 2516-47-4, Aminomethylcyclopropane 2566-44-1, 2-Cyclopropylethanol
 2629-72-3, 3-(4-Pyridyl)propanol 2646-91-5, 2,3-Difluorobenzaldehyde
 2713-34-0, 3,5-Difluorophenol 2746-14-7, (1-Methylcyclopropyl)methanol
 2916-68-9, 2-(Trimethylsilyl)ethanol 2955-88-6,
 1-(2-Hydroxyethyl)pyrrolidine 3040-44-6, 1-(2-Hydroxyethyl)piperidine
 3143-02-0, 3-Methyl-3-oxetanemethanol 3173-56-6, Benzyl isocyanate
 3179-63-3 3218-36-8, 4-Biphenylaldehyde 3445-11-2,
 N-(2-Hydroxyethyl)-2-pyrrolidone 3453-33-6, 6-Methoxy-2-naphthaldehyde
 3601-66-9 3966-32-3, (R)- α -Methoxybenzeneethanoic acid
 4397-53-9, 4-Benzyloxybenzaldehyde 4415-82-1, Cyclobutylmethanol
 4548-45-2, 2-Chloro-5-nitropyridine 4584-46-7,
 1-Chloro-2-dimethylaminoethane hydrochloride 4595-59-9,
 5-Bromopyrimidine 4856-97-7, 1H-Benzimidazole-2-methanol 4870-65-9,
 α -Bromobenzoic acid 5402-55-1, 2-(2-Thienyl)ethanol
 5720-05-8, 4-Methylbenzeneboronic acid 5720-06-9, 2-Methoxyphenylboronic
 acid 5720-07-0, 4-Methoxyphenylboronic acid 6077-72-1,
 (2-Methylcyclopropyl)methanol 6089-04-9,
 Tetrahydro-2-(2-propynyloxy)-2H-pyran 6244-54-8,
 2-(Biphenyl-4-yl)-2-hydroxypropionic acid 6293-56-7,
 3-(2-Hydroxyethyl)pyridine 6346-05-0, 3-Benzyloxy-4-methoxybenzaldehyde
 6630-33-7, 2-Bromobenzaldehyde 7583-53-1, 1-Methyl-3-piperidinemethanol
 7589-27-7, 4-Fluorophenethyl alcohol 7677-24-9, Trimethylsilyl cyanide
 10040-98-9, 1-(4-Formylphenyl)-1H-imidazole 10365-98-7,
 3-Methoxyphenylboronic acid 10406-25-4, 4-Aminomethylbenzonitrile
 13331-23-2, 2-Furanboronic acid 13472-85-0, 5-Bromo-2-methoxypyridine
 15854-87-2, 4-Iodopyridine 15996-76-6, 4-Aminomethylbenzonitrile
 hydrochloride 17392-83-5, Methyl (R)-(+)-lactate 17933-03-8,
 m-Tolylboronic acid 19059-68-8, 3-Dimethylamino-2,2-dimethyl-1-propanol
 19524-06-2, 4-Bromopyridine hydrochloride 20845-34-5,
 1-Methyl-2-piperidinemethanol 25494-07-9 26164-26-1,
 (S)- α -Methoxybenzeneethanoic acid 26934-35-0,
 4-[3-(Dimethylamino)propoxy]benzaldehyde 28611-39-4,
 (4-Dimethylaminophenyl)boronic acid 32884-23-4,
 2-Benzyloxy-4-methoxybenzaldehyde 39096-01-0,
 N,N-Diethyl-2-hydroxyacetamide 39515-51-0, 3-Phenoxybenzaldehyde
 51791-12-9, 3-(Chloromethyl)-1,2,4-oxadiazole 51980-54-2,
 4-(Pyrrolidino)benzaldehyde 54439-75-7, 2-Chloro-4-methoxybenzaldehyde
 57848-46-1, 4-Bromo-2-fluorobenzaldehyde 58028-76-5,
 2-(Morpholino)benzaldehyde 58479-61-1, tert-Butyldiphenylchlorosilane
 59664-42-5, 2,4-Bis(trifluoromethyl)benzaldehyde 61370-75-0,
 2,2-Dimethylchromane-6-carboxaldehyde 63628-25-1,
 2-Methoxy-2-(1-naphthyl)propionic acid 67387-76-2,

3-(Cyclopentyl-4-methoxybenzaldehyde 71924-62-4,
6-Fluoroveratraldehyde 73183-34-3 79418-73-8,
2-Fluoro-3-hydroxy-4-methoxybenzaldehyde 81655-41-6 84102-89-6,
4-Formyl-3-hydroxybenzonitrile 87199-18-6, 3-Hydroxyphenylboronic acid
89466-08-0, 2-Hydroxyphenylboronic acid 89763-93-9,
2-Fluoro-4-(trifluoromethyl)benzaldehyde 93249-44-6,
2-Fluoro-5-methylbenzaldehyde 93343-10-3, 3,5-Difluoroanisole
93777-26-5, 5-Bromo-2-fluorobenzaldehyde 98546-51-1,
4-(Methylthio)phenylboronic acid 103438-88-6,
2-Fluoro-3-methoxybenzaldehyde 105942-09-4,
4-(Bromomethyl)-3-fluorobenzonitrile 105942-10-7,
3-Fluoro-4-formylbenzonitrile 109384-19-2,
1-tert-Butoxycarbonyl-4-hydroxypiperidine 146137-74-8,
2-Fluoro-6-methoxybenzaldehyde 146137-78-2,
5-(Trifluoromethyl)-2-fluorobenzaldehyde 162698-22-8,
[(Amino(4-aminomethylphenyl)methylene]carbamic acid benzyl ester
hydrochloride 172348-75-3, [(4-Aminomethylphenyl)imino]methyl]carbamic
acid benzyl ester dihydrochloride 176175-97-6,
1-Benzyloxy-3,5-difluorobenzene 182159-14-4,
4-Aminomethyl-3-methoxybenzonitrile 188975-30-6,
Trifluoromethanesulfonic acid 3,6-dihydro-2H-pyran-4-yl ester
200195-15-9, 3-Oxo-3,4-dihydro-2H-benzo[1,4]oxazine-6-carboxaldehyde
202521-97-9, 4-Aminomethyl-3-chlorobenzonitrile 202522-15-4,
4-Aminomethyl-2-chlorobenzonitrile 223512-70-7,
4-Bromomethyl-3-nitrobenzonitrile 256417-10-4,
2,6-Difluoro-4-methoxybenzaldehyde 277324-21-7,
3,5-Diethoxy-2-fluorobenzaldehyde 368426-73-7,
4-Aminomethyl-2-fluorobenzonitrile 376600-66-7,
5-Ethoxy-2-fluoro-4-(2-hydroxyethoxy)benzaldehyde 467442-15-5,
3,5-Difluoro-4-formylbenzonitrile 701263-50-5,
5-Ethoxy-2-fluoro-3-(1-methylpiperidin-4-yl)benzaldehyde 701263-78-7,
(3-Benzyloxyphenyl)(methoxy)acetic acid 701263-88-9,
N-(4-Cyanobenzyl)-2-(3-hydroxyphenyl)-2-methoxyacetamide 701263-96-9,
3,4-Diethoxy-2-fluorobenzaldehyde 701264-46-2,
2-(4-Bromo-2-fluorophenyl)-N-(4-cyanobenzyl)-2-methoxyacetamide
701265-02-3, O-Benzyl-3-fluorobenzene 701265-37-4,
4-(5-Ethoxy-2-fluoro-3-formylphenoxy)piperidine-1-carboxylic acid
tert-butyl ester 701267-79-0, 2-(4-Bromo-2,6-difluorophenyl)-N-(4-
cyanobenzyl)-2-ethoxyacetamide 701269-03-6,
N-(4-Cyanobenzyl)-2-[2,6-difluoro-4-[(pyridin-2-yl)methoxy]phenyl]-2-
ethoxyacetamide 701269-52-5 701270-17-9, 4-Aminomethylbenzamidine
hydrochloride

RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of N-(carbamimidoylbenzyl)benzeneacetamides and
pyridineacetamides as coagulation factor inhibitors)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Anon; WO 0035858 A1 CAPLUS
- (2) Anon; WO 0168605 A1 CAPLUS
- (3) Anon; WO 0190051 A1 CAPLUS
- (4) Anon; WO 0192214 A1 CAPLUS
- (5) Anon; WO 02062829 A1 CAPLUS
- (6) Anon; WO 0210127 A1 CAPLUS
- (7) Anon; WO 0216315 A1 CAPLUS
- (8) Anon; WO 0228823 A1
- (9) Anon; WO 0234711 A1 CAPLUS
- (10) Anon; WO 0237937 A2 CAPLUS
- (11) Anon; WO 03020710 A1 CAPLUS
- (12) Anon; EP 0921116 A1 CAPLUS
- (13) Anon; EP 1078917 A1 CAPLUS

AN 2003:487141 CAPLUS
 DN 139:53457
 ED Entered STN: 26 Jun 2003
 TI Procedure for the anhydrous production of formic acid and (meth)acrylate esters by the transesterification of formate esters and (meth)acrylic acids
 IN Zehner, Peter; Pastre, Joerg; Stueer, Wolfram; Machhammer, Otto; Schroeder, Juergen
 PA BASF A.-G., Germany
 SO Ger. Offen., 10 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 IC ICM C07C027-00
 ICS C07C067-02; C07C051-09; C07C053-02; C07C069-54
 CC 35-2 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 23, 48

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10230221	A1	20030626	DE 2002-10230221	20020704
PRAI	DE 2002-10230221		20020704		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 10230221	ICM	C07C027-00
	ICS	C07C067-02; C07C051-09; C07C053-02; C07C069-54
	IPCI	C07C0027-00 [ICM,7]; C07C0067-02 [ICS,7]; C07C0067-00 [ICS,7,C*]; C07C0051-09 [ICS,7]; C07C0053-02 [ICS,7]; C07C0053-00 [ICS,7,C*]; C07C0069-54 [ICS,7]; C07C0069-00 [ICS,7,C*]
	IPCR	C07C0051-09 [I,C*]; C07C0051-09 [I,A]; C07C0067-00 [I,C*]; C07C0067-10 [I,A]
	ECLA	C07C051/09+53/02; C07C067/10+69/54

OS MARPAT 139:53457

AB Formic acid and (meth)acrylate esters (e.g., Me acrylate) are prepared by the transesterification of a formate ester (e.g., Me formate) with (meth)acrylic acids (e.g., acrylic acid), and the (meth)acrylate ester is then transesterified with a higher alc. methyl acrylate manuf transesterification formate ester acrylic acid; alkyl methacrylate manuf transesterification formate ester methacrylic acid

IT Transesterification catalysts
 (acid cation exchangers; procedure for the anhydrous production of formic acid and (meth)acrylate esters by the transesterification of formate esters and (meth)acrylic acids using)

IT Carboxylic acids, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (esters, alkyl formates; procedure for the anhydrous production of formic acid and (meth)acrylate esters by the transesterification of formate esters and (meth)acrylic acids)

IT Transesterification
 (procedure for the anhydrous production of formic acid and (meth)acrylate esters by the transesterification of formate esters and (meth)acrylic acids)

IT 11138-38-8, Lewatit S100
 RL: CAT (Catalyst use); USES (Uses)
 (catalyst; procedure for the anhydrous production of formic acid and (meth)acrylate esters by the transesterification of formate esters and (meth)acrylic acids)

IT 71-36-3, 1-Butanol, reactions 71-41-0, 1-Pentanol, reactions 77-99-6, Trimethylolpropane 100-37-8, 2-(Diethylamino)ethanol 102-81-8, 2-(Dibutylamino)ethanol 104-76-7, 2-Ethylhexanol 108-01-0, 2-(Dimethylamino)ethanol 110-63-4, 1,4-Butanediol, reactions 111-87-5, 1-Octanol, reactions 115-77-5, Pentaerythritol, reactions 143-08-8, 1-Nonanol 629-11-8, 1,6-Hexanediol 24800-44-0, Tripropylene glycol 25265-71-8, Dipropylene glycol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in a procedure for the anhydrous production of formic acid and (meth)acrylate esters by the transesterification of formate esters and (meth)acrylic acids)

IT 64-18-6P, Formic acid, preparation
 RL: BYP (Byproduct); PREP (Preparation)
 (procedure for the anhydrous production of formic acid and (meth)acrylate esters by the transesterification of formate esters and (meth)acrylic acids)

IT 80-62-6P, Methyl methacrylate 96-33-3P, Methyl acrylate
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (procedure for the anhydrous production of formic acid and (meth)acrylate esters by the transesterification of formate esters and (meth)acrylic acids)

IT 107-31-3P, Methyl formate
 RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (procedure for the anhydrous production of formic acid and (meth)acrylate esters by the transesterification of formate esters and (meth)acrylic acids)

IT 79-10-7, Acrylic acid, reactions 79-41-4, Methacrylic acid, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (procedure for the anhydrous production of formic acid and (meth)acrylate esters by the transesterification of formate esters and (meth)acrylic acids)

L9 ANSWER 21 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2002:944826 CAPLUS

DN 138:25860

ED Entered STN: 13 Dec 2002

TI Lead-free cationic electrodeposition coating compositions containing crosslinked resin particles

IN Kojima, Yoshio; Uchidoi, Satoru; Yamada, Mitsuo

PA Nippon Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09D163-00

ICS C09D005-44; C09D133-12; C09D133-14; C09D175-04; C25D013-06;

C25D013-10

CC 42-9 (Coatings, Inks, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002356646	A	20021213	JP 2001-164399	20010531
PRAI	JP 2001-164399		20010531		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2002356646	ICM	C09D163-00
	ICS	C09D005-44; C09D133-12; C09D133-14; C09D175-04; C25D013-06; C25D013-10
	IPCI	C09D0163-00 [ICM,7]; C09D0005-44 [ICS,7]; C09D0133-12 [ICS,7]; C09D0133-10 [ICS,7,C*]; C09D0133-14 [ICS,7];

C09D0175-04 [ICS,7]; C25D0013-06 [ICS,7]; C25D0013-04 [ICS,7,C*]; C25D0013-10 [ICS,7]

IPCR C09D0163-00 [I,C*]; C09D0163-00 [I,A]; C09D0005-44 [I,C*]; C09D0005-44 [I,A]; C09D0133-10 [I,C*]; C09D0133-12 [I,A]; C09D0133-14 [I,C*]; C09D0133-14 [I,A]; C09D0175-04 [I,C*]; C09D0175-04 [I,A]; C25D0013-04 [I,C*]; C25D0013-06 [I,A]; C25D0013-10 [I,C*]; C25D0013-10 [I,A]

AB The compns. have a min. film-forming temperature of 20-35, are based on (A) cationic polymers comprising a 10-90:90-10 mixture of amine-modified epoxy resins (A1) and sulfonium-modified epoxy resins (A2) and crosslinkers (blocked polyisocyanates), and contain 3-20% (based on resins in A) crosslinked resin particles prepared from α,β -unsatd. monomers in the presence of ammonium group-containing acrylic polymers as emulsifiers, where the amine groups of A1 have been neutralized with acids (HCOOH) to 5-30 mequiv per 100 g of resin and crosslinker, and the sulfonium group content is at 5-30 mequiv.

ST cationic deposition coating modified epoxy resin blocked polyisocyanate crosslinker

IT Electrodeposition
(cationic; lead-free cationic deposition coating compns. for use on metal sheets with freedom from pinholes and crater)

IT Polymerization
(emulsion; manufacture of lead-free cationic electrodeposition coating compns. containing crosslinked resin particles)

IT Galvanized steel
RL: MSC (Miscellaneous)
(sheet metals; manufacture of lead-free cationic electrodeposition coating compns. containing crosslinked resin particles)

IT 91-08-7DP, 2,6-TDI, blocked derivative 101-68-8DP, MDI, blocked derivative 584-84-9DP, 2,4-TDI, blocked derivative 4098-71-9DP, IPDI, blocked derivative
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(crosslinker; lead-free cationic deposition coating compns. for use on metal sheets with freedom from pinholes and crater)

IT 108-01-0DP, N,N-Dimethylaminoethanol, reaction products with glycidyl methacrylate copolymer
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(emulsifiers; manufacture of lead-free cationic electrodeposition coating compns. containing crosslinked resin particles)

IT 443762-01-4DP, Butyl methacrylate-2-ethylhexyl methacrylate-glycidyl methacrylate-2-hydroxyethyl methacrylate copolymer, reaction products with dimethylaminoethanol
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(emulsifiers; manufacture of lead-free cationic electrodeposition coating compns. containing crosslinked resin particles)

IT 108-01-0DP, Dimethylethanolamine, cationic derivs. with epoxy resins 111-42-2DP, Diethanolamine, cationic derivs. with epoxy resins 6713-03-7DP, SHP 100 (sulfide), reaction products with epoxy resins 25068-38-6DP, Bisphenol A-epichlorohydrin copolymer, cationic derivs.
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(lead-free cationic deposition coating compns. for use on metal sheets with freedom from pinholes and crater)

IT 104-76-7DP, 2-Ethylhexanol, polyisocyanate blocked derivative 105-60-2DP, ϵ -Caprolactam, polyisocyanate blocked derivative
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(lead-free cationic deposition coating comps. for use on metal sheets with freedom from pinholes and crater)

IT 50-21-5, Lactic acid, uses 64-18-6, Formic acid, uses 64-19-7, Acetic acid, uses 4767-03-7, Dimethylolpropionic acid 5329-14-6, Sulfamic acid 56743-27-2, Dimethylolbutanoic acid
 RL: MOA (Modifier or additive use); USES (Uses)
 (neutralizing agent; lead-free cationic deposition coating comps. for use on metal sheets with freedom from pinholes and crater)

IT 478036-79-2P, Butyl methacrylate-glycidyl methacrylate-methyl methacrylate-neopentyl glycol-styrene copolymer
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (particles; manufacture of lead-free cationic electrodeposition coating comps. containing crosslinked resin particles)

L9 ANSWER 22 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2002:146404 CAPLUS
 DN 137:32937
 ED Entered STN: 26 Feb 2002

TI A solvent-free and formalin-free Eschweiler-Clarke methylation of amines
 AU Rosenau, Thomas; Potthast, Antje; Rohrling, Jurgen; Hofinger, Andreas; Sixta, Herbert; Kosma, Paul
 CS Institute of Chemistry, Christian-Doppler-Laboratory, University of Agricultural Sciences, Vienna, Vienna, A - 1190, Austria
 SO Synthetic Communications (2002), 32(3), 457-465
 CODEN: SYNCAV; ISSN: 0039-7911

PB Marcel Dekker, Inc.
 DT Journal
 LA English
 CC 21-2 (General Organic Chemistry)
 OS CASREACT 137:32937

AB Primary and secondary amines are N-methylated by a mixture of paraformaldehyde and oxalic acid dihydrate in good to excellent yields. The reaction proceeds without involvement of organic solvents and toxic formalin. Reaction temps. of 100° are required for the decomposition of oxalic acid to the intermediate formic acid, which acts as the actual reductant. The reaction conditions have been optimized, and the mechanism has been elucidated by means of deuteration expts.

ST methylation amine paraformaldehyde oxalic acid dihydrate
 IT Methylation
 (Eschweiler-Clarke; solvent-free and formalin-free Eschweiler-Clarke methylation of amines)

IT Amines, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (solvent-free and formalin-free Eschweiler-Clarke methylation of amines)

IT 62-53-3, Aniline, reactions 107-15-3, Ethylenediamine, reactions 110-91-8, Morpholine, reactions 141-43-5, 2-Aminoethanol, reactions 506-59-2, Dimethylamine hydrochloride 2065-72-7, Oxalic acid-d2 dihydrate-d2 6153-56-6, Oxalic acid dihydrate 30525-89-4, Paraformaldehyde 43094-80-0, Paraformaldehyde-d2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (solvent-free and formalin-free Eschweiler-Clarke methylation of amines)

IT 108-01-0P, 2-(Dimethylamino)ethanol 109-02-4P, 4-Methylmorpholine 110-18-9P, N,N,N',N'-Tetramethylethylenediamine 121-69-7P, N,N-Dimethylaniline, preparation 593-81-7P, Trimethylamine hydrochloride 134619-42-4P 134619-43-5P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (solvent-free and formalin-free Eschweiler-Clarke methylation of amines)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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- (2) Eschweiler, W; Chem Ber 1905, V38, P880 CAPLUS
- (3) Holleman, A; Lehrbuch der anorganischen Chemie; 91-100 Ed 1985, P439
- (4) Lapidus, G; Phys Chem 1964, V68, P1863 CAPLUS
- (5) Lapidus, G; Phys Chem 1966, V70, P1575 CAPLUS
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- (7) Lapidus, G; Phys Chem 1966, V70, P407 CAPLUS
- (8) Leuckardt, R; Ber Dtsch Chem Ges 1885, V18, P2341
- (9) Lukasiewicz, A; Tetrahedron 1963, V19, P1789
- (10) Rosenau, T; J Org Chem 1999, V64, P2166 CAPLUS

L9 ANSWER 23 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2001:319483 CAPLUS

DN 134:315040

ED Entered STN: 04 May 2001

TI Low viscosity, Cl-free stabilized hardening accelerators of concrete and mortar

IN Burge, Theodor A.; Sommer, Marcel; Wombacher, Franz

PA Sika A.-G., Vorm. Kaspar Winkler & Co., Switz.

SO Eur. Pat. Appl., 12 pp.

CODEN: EPXXDW

DT Patent

LA German

IC ICM C04B040-00

ICS C04B022-08; C04B022-14

CC 58-2 (Cement, Concrete, and Related Building Materials)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1095922	A1	20010502	EP 1999-121549	19991029
	EP 1095922	B1	20021211		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	AT 229487	T	20021215	AT 1999-121549	19991029
	ES 2186289	T3	20030501	ES 1999-121549	19991029
	CA 2324393	A1	20010429	CA 2000-2324393	20010124
	US 6514327	B1	20030204	US 2000-697351	20001027
	JP 2001180994	A	20010703	JP 2000-330997	20001030
	JP 3995877	B2	20071024		
	AU 2001038785	A	20021024	AU 2001-38785	20010423
	AU 783765	B2	20051201		
	NZ 511309	A	20030328	NZ 2001-511309	20010424
	IN 2001MA00353	A	20081128	IN 2001-MA353	20010501
PRAI	EP 1999-121549	A	19991029		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1095922	ICM	C04B040-00
	ICS	C04B022-08; C04B022-14
	IPCI	C04B0040-00 [ICM,6]; C04B0022-08 [ICS,6]; C04B0022-14 [ICS,6]; C04B0022-00 [ICS,6,C*]
	IPCR	C04B0022-00 [I,C*]; C04B0022-06 [I,A]; C04B0022-08 [I,A]; C04B0022-14 [I,A]; C04B0024-00 [I,C*]; C04B0024-02 [I,A]; C04B0024-06 [I,A]; C04B0024-10 [I,A]; C04B0024-12 [I,A]; C04B0024-26 [I,A]; C04B0024-28 [I,A]; C04B0024-32 [I,A]; C04B0028-00 [I,C*]; C04B0028-02 [I,A]; C04B0040-00 [I,C*]; C04B0040-00 [I,A]; C04B0103-12 [N,A]; C04B0103-14 [N,A]
	ECLA	C04B022/08; C04B022/14G6; C04B040/00D4
AT 229487	IPCI	C04B0040-00 [ICM,7]; C04B0022-08 [ICS,7]; C04B0022-14 [ICS,7]; C04B0022-00 [ICS,7,C*]

	IPCR	C04B0022-00 [I,C*]; C04B0022-08 [I,A]; C04B0022-14 [I,A]; C04B0040-00 [I,A]; C04B0040-00 [I,C*]
ES 2186289	ECLA	C04B022/08; C04B022/14G6; C04B040/00D4
	IPCI	C04B0040-00 [ICM,7]; C04B0022-08 [ICS,7]; C04B0022-14 [ICS,7]; C04B0022-00 [ICS,7,C*]
	IPCR	C04B0022-00 [I,C*]; C04B0022-06 [I,A]; C04B0022-08 [I,A]; C04B0022-14 [I,A]; C04B0024-00 [I,C*]; C04B0024-02 [I,A]; C04B0024-06 [I,A]; C04B0024-10 [I,A]; C04B0024-12 [I,A]; C04B0024-26 [I,A]; C04B0024-28 [I,A]; C04B0024-32 [I,A]; C04B0028-00 [I,C*]; C04B0028-02 [I,A]; C04B0040-00 [I,C*]; C04B0040-00 [I,A]; C04B0103-12 [N,A]; C04B0103-14 [N,A]
CA 2324393	ECLA	C04B022/08; C04B022/14G6; C04B040/00D4
	IPCI	C04B0022-08 [ICM,7]; C04B0022-00 [ICM,7,C*]; C04B0024-02 [ICS,7]; C04B0024-00 [ICS,7,C*]
	IPCR	C04B0022-00 [I,C*]; C04B0022-06 [I,A]; C04B0022-08 [I,A]; C04B0022-14 [I,A]; C04B0024-00 [I,C*]; C04B0024-02 [I,A]; C04B0024-06 [I,A]; C04B0024-10 [I,A]; C04B0024-12 [I,A]; C04B0024-26 [I,A]; C04B0024-28 [I,A]; C04B0024-32 [I,A]; C04B0028-00 [I,C*]; C04B0028-02 [I,A]; C04B0040-00 [I,C*]; C04B0040-00 [I,A]; C04B0103-12 [N,A]; C04B0103-14 [N,A]
US 6514327	ECLA	C04B022/08; C04B022/14G6; C04B040/00D4
	IPCI	C04B0022-08 [ICM,7]; C04B0022-00 [ICM,7,C*]; C04B0024-12 [ICS,7]; C04B0024-00 [ICS,7,C*]; C23F0011-00 [ICS,7]
	IPCR	C04B0022-00 [I,C*]; C04B0022-06 [I,A]; C04B0022-08 [I,A]; C04B0022-14 [I,A]; C04B0024-00 [I,C*]; C04B0024-02 [I,A]; C04B0024-06 [I,A]; C04B0024-10 [I,A]; C04B0024-12 [I,A]; C04B0024-26 [I,A]; C04B0024-28 [I,A]; C04B0024-32 [I,A]; C04B0028-00 [I,C*]; C04B0028-02 [I,A]; C04B0040-00 [I,C*]; C04B0040-00 [I,A]; C04B0103-12 [N,A]; C04B0103-14 [N,A]
	NCL	106/014.110; 106/014.050; 106/014.150; 106/014.440; 106/287.170; 106/724.000; 106/727.000; 106/728.000; 106/802.000; 106/808.000; 106/810.000; 106/823.000
JP 2001180994	ECLA	C04B022/08; C04B022/14G6; C04B040/00D4
	IPCI	C04B0022-08 [I,A]; C04B0022-14 [I,A]; C04B0022-00 [I,C*]; C04B0024-02 [I,A]; C04B0024-06 [I,A]; C04B0024-10 [I,A]; C04B0024-12 [I,A]; C04B0024-26 [I,A]; C04B0024-28 [I,A]; C04B0024-32 [I,A]; C04B0024-00 [I,C*]; C04B0028-02 [I,A]; C04B0028-00 [I,C*]
	IPCR	C04B0022-00 [I,C*]; C04B0022-06 [I,A]; C04B0022-08 [I,A]; C04B0022-14 [I,A]; C04B0024-00 [I,C*]; C04B0024-02 [I,A]; C04B0024-06 [I,A]; C04B0024-10 [I,A]; C04B0024-12 [I,A]; C04B0024-26 [I,A]; C04B0024-28 [I,A]; C04B0024-32 [I,A]; C04B0028-00 [I,C*]; C04B0028-02 [I,A]; C04B0040-00 [I,C*]; C04B0040-00 [I,A]; C04B0103-12 [N,A]; C04B0103-14 [N,A]
AU 2001038785	IPCI	C04B0022-00 [ICM,7]; C04B0022-14 [ICS,7]; C04B0024-04 [ICS,7]; C04B0024-00 [ICS,7]
	IPCR	C04B0022-00 [I,C*]; C04B0024-00 [I,C*]; C04B0022-00 [I,A]; C04B0022-14 [I,A]; C04B0024-00 [I,A]; C04B0024-04 [I,A]
NZ 511309	IPCI	C04B0022-00 [ICM,7]; C04B0022-14 [ICS,7]; C04B0024-00 [ICS,7]; C04B0024-04 [ICS,7]
	IPCR	C04B0022-00 [I,C*]; C04B0022-00 [I,A]; C04B0022-14 [I,A]; C04B0024-00 [I,C*]; C04B0024-00 [I,A]; C04B0024-04 [I,A]
IN 2001MA00353	IPCI	C04B0022-08 [ICM,7]; C04B0022-00 [ICM,7,C*]

AB The setting accelerator compns. comprise ≥1 an alkali-free and

Cl-free aluminum salt including ≥ 1 a complex binder for Al ion and ≥ 1 a corrosion inhibitor. The aluminum salt is selected from aluminum sulfate, nitrate, glycolate, lactate, acetate, formate, hydroxy-formate, or mixts. thereof. The complex binder is selected from nitrilotriacetic acid, ethylenediamine tetra-acetic acid, gluconic acid, heptonic acid, phosphonic acid or mixts. thereof. The corrosion inhibitor is selected from alkyne, butindiol, propargylalc., 3-(methylamino)propylamine, 3-(Dimethylamino)propylamine, 3-(Diethylamino)propylamine, Cyclohexylamine, N-Methylcyclohexylamine, N-Ethylcyclohexylamine, 1-(Dimethylamino)-2-propanol, 1-(Ethylamino)-2-propanol, 1-(Cyclohexylamino)-2-propanol, 3-Amino-1-propanol, 2-Aminoethanol, 2,2'-Iminodiethanol, 2-(Methylamino)ethanol, 2-(Dimethylamino)ethanol, 2-(Ethylamino)ethanol, and 2-(Diethylamino)ethanol. A thickening agent selected from bentonite, bentone, biopolymers, alginate, polyglycolether, acrylate-based or urethane-based thickener, carboxylic acid ester, or mixts. thereof may be also added to the compns. in the from of aqueous solution. The resulting accelerators are suitable for cement-based mortars, concrete, plasters, and shotcrete.

- ST concrete mortar plaster setting accelerator corrosion inhibitor
- IT Setting agents
 - (accelerators, based on Al salt; low viscosity, Cl-free stabilized hardening accelerators of concrete and mortar)
- IT Concrete modifiers
 - (accelerators; low viscosity, Cl-free stabilized hardening accelerators of concrete and mortar)
- IT Alkynes
 - RL: MOA (Modifier or additive use); USES (Uses)
 - (corrosion inhibitor; low viscosity, Cl-free stabilized hardening accelerators of concrete and mortar)
- IT Carboxylic acids, uses
 - RL: MOA (Modifier or additive use); USES (Uses)
 - (esters, thickening agent; low viscosity, Cl-free stabilized hardening accelerators of concrete and mortar)
- IT Corrosion inhibitors
 - (of cement concrete and mortar; low viscosity, Cl-free stabilized hardening accelerators of concrete and mortar)
- IT Glycols, uses
 - RL: MOA (Modifier or additive use); USES (Uses)
 - (polyglycolether, thickening agent; low viscosity, Cl-free stabilized hardening accelerators of concrete and mortar)
- IT Cement (construction material)
 - (portland; low viscosity, Cl-free stabilized hardening accelerators of concrete and mortar)
- IT Plaster
 - (setting accelerator for; low viscosity, Cl-free stabilized hardening accelerators of concrete and mortar)
- IT Mortar
 - (shotcrete, setting accelerator for; low viscosity, Cl-free stabilized hardening accelerators of concrete and mortar)
- IT Bentonite, uses
 - Biopolymers
 - Urethanes
 - RL: MOA (Modifier or additive use); USES (Uses)
 - (thickening agent; low viscosity, Cl-free stabilized hardening accelerators of concrete and mortar)
- IT 60-00-4, Ethylenediamine tetraacetic acid, uses 139-13-9,
 Nitrilotriacetic acid 526-95-4, Gluconic acid 2782-86-7, Heptonic acid 13598-36-2, Phosphonic acid
 RL: MOA (Modifier or additive use); USES (Uses)
 (accelerator binder; low viscosity, Cl-free stabilized hardening accelerators of concrete and mortar)

IT 100-37-8, 2-(Diethylamino)ethanol 100-60-7, N-Methylcyclohexylamine
 103-00-4, 1-(Cyclohexylamino)-2-propanol 104-78-9,
 3-(Diethylamino)propylamine 107-19-7, Propargylalcohol 108-01-0, 2-(
 Dimethylamino)ethanol 108-16-7,
 1-(Dimethylamino)-2-propanol 108-91-8, Cyclohexylamine, uses 109-55-7,
 3-(Dimethylamino)propylamine 109-83-1, 2-(Methylamino)ethanol
 110-73-6, 2-(Ethylamino)ethanol 111-42-2, 2,2'-Iminodiethanol, uses
 141-43-5, 2-Aminoethanol, uses 156-87-6, 3-Amino-1-propanol 5459-93-8,
 N-Ethylcyclohexylamine 6291-84-5, 3-(Methylamino)propylamine
 11070-67-0, Butynediol 40171-86-6, 1-(Ethylamino)-2-propanol
 RL: MOA (Modifier or additive use); USES (Uses)
 (corrosion inhibitor; low viscosity, Cl-free stabilized hardening
 accelerators of concrete and mortar)

IT 139-12-8, Aluminum acetate 7360-53-4, Aluminum formate
 10043-01-3, Aluminum sulfate 13473-90-0, Aluminum nitrate 18917-91-4,
 Aluminum lactate 19878-87-6, Aluminum glycolate
 RL: MOA (Modifier or additive use); USES (Uses)
 (setting accelerator; low viscosity, Cl-free stabilized hardening
 accelerators of concrete and mortar)

IT 1340-68-7, Bentone 9005-32-7, Alginate acid 10344-93-1, Acrylate, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (thickening agent; low viscosity, Cl-free stabilized hardening
 accelerators of concrete and mortar)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

- (1) Lunkenheimer, R; WO 9818740 A 1998 CAPLUS
- (2) Mbt Holding Ag; EP 0812812 A 1997 CAPLUS
- (3) Nordhausen Schachtbau; DD 266344 A 1989 CAPLUS
- (4) Sika Ag; EP 0076927 A 1983 CAPLUS
- (5) Sika Ag; EP 0657398 A 1995 CAPLUS
- (6) Stepita; CS 217017 A 1985 CAPLUS
- (7) United States Gypsum Co; GB 2140794 A 1984 CAPLUS

L9 ANSWER 24 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2001:317316 CAPLUS

DN 135:77844

ED Entered STN: 04 May 2001

TI Effects of thiazolium counter anion and reaction media on the activity of
 immobilized thiazolium catalyst

AU Tajima, Hideo; Niitsu, Takashi; Inoue, Hakuai; Ito, Masato M.

CS Department of Bioengineering, Soka University, Hachioji, 192-8577, Japan

SO Journal of Chemical Engineering of Japan (2001), 34(4), 553-557

CODEN: JCEJQA; ISSN: 0021-9592

PB Society of Chemical Engineers, Japan

DT Journal

LA English

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 22, 33, 35

AB We quant. studied the effects of counter anions and solvents on the
 catalytic activity of thiazolium due to the completion of the formose
 reaction using the highly active immobilized catalyst. The relation
 between counter anions and the catalytic activity of thiazolium was
 represented very well by the electron donor constant and the basic constant of
 the anions. The solvent effect was represented by the individual solvent
 parameter. In this study, it was given an important information about the
 effects of the counter anion and the solvent on the reaction using an
 immobilized thiazolium catalyst.

ST immobilized thiazolium bound copolymer catalyst; counter anion immobilized
 thiazolium catalyst activity; reaction media immobilized thiazolium
 catalyst activity; solvent effect immobilized thiazolium catalyst
 activity; formose reaction immobilized thiazolium catalyst activity
 IT Catalysts

Counterions

Solvent effect

(effects of thiazolium counter anion and reaction media on activity of copolymer immobilized thiazolium catalyst)

- IT 71-47-6, Formate, uses 71-50-1, Acetate, uses 302-04-5, Thiocyanate, uses 14797-55-8, Nitrate, uses 14797-73-0, Perchlorate 14996-02-2, Sulfate (HSO41-), uses 16053-58-0, Methanesulfonate anion 16887-00-6, Chloride, uses 16984-48-8, Fluoride, uses 20461-54-5, Iodide, uses 24959-67-9, Bromide, uses 52912-48-8
RL: NUU (Other use, unclassified); USES (Uses)

(counter ion; effects of thiazolium counter anion and reaction media on activity of copolymer immobilized thiazolium catalyst)

- IT 137-00-8D, 2-(4-Methyl-5-thiazolyl)ethanol, reaction products with chloromethylated divinylbenzene-styrene copolymer 9003-70-7D, Divinylbenzene-styrene copolymer, chloromethylated, thiazolium derivative
RL: CAT (Catalyst use); USES (Uses)

(effects of thiazolium counter anion and reaction media on activity of copolymer immobilized thiazolium catalyst)

- IT 50-00-0, Formaldehyde, reactions 108-01-0, 2-Dimethylaminoethanol 8069-42-9, Formose

RL: RCT (Reactant); RACT (Reactant or reagent)

(effects of thiazolium counter anion and reaction media on activity of copolymer immobilized thiazolium catalyst)

- IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 67-68-5, DMSO, uses 68-12-2, DMF, uses 75-05-8, Acetonitrile, uses 107-12-0, Ethyl cyanide 110-86-1, Pyridine, uses 123-91-1, Dioxane, uses 141-78-6, Ethyl acetate, uses 7732-18-5, Water, uses

RL: NUU (Other use, unclassified); USES (Uses)

(solvent; effects of thiazolium counter anion and reaction media on activity of copolymer immobilized thiazolium catalyst)

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Bassedas, M; Reactive Polymers 1987, V6, P109 CAPLUS
- (2) Chang, B; J Chinese Chem Soc 1983, V30, P55 CAPLUS
- (3) Chastrette, M; Can J Chem 1985, V63, P3492 CAPLUS
- (4) Edwards, J; J Am Chem Soc 1954, V76, P1540 CAPLUS
- (5) El Hange Chahire, J; J Am Chem Soc 1983, V105, P2335
- (6) El Hange Chahire, J; J Chem Soc Perkin Trans II 1989, P25
- (7) Isaacs, N; Physical Organic Chemistry 1987
- (8) Matsumoto, T; J Am Chem Soc 1984, V106, P4829 CAPLUS
- (9) Nipponkagakukai; Kagakubinran Kisoheii II in Japanese 1984
- (10) Ruasse, M; Pure Appl Chem 1997, V69, P1923 CAPLUS
- (11) Sainoto, H; Tetrahedron Lett 1989, V30, P2553 CAPLUS
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- (13) Tajima, H; J Chem Eng Japan 2000, V33, P793 CAPLUS
- (14) Tee, O; J Org Chem 1986, V51, P2150 CAPLUS
- (15) Van den Berg, H; J Mol Catal 1989, V51, P13 CAPLUS

L9 ANSWER 25 OF 55 CAPLUS COPYRIGHT 2009 ACS ON STN
AN 1999:728127 CAPLUS

DN 131:338432

ED Entered STN: 17 Nov 1999

TI Aqueous ink for ink-jet printing

IN Aoyama, Tetsuya

PA Seiko Epson Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JRXAXF

DT Patent

LA Japanese

IC ICM C09D011-00

CC 42-12 (Coatings, Inks, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11315229	A	19991116	JP 1998-123755	19980506
PRAI	JP 1998-123755		19980506		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	JP 11315229	ICM	C09D011-00
		IPCI	C09D0011-00 [ICM,6]
		IPCR	C09D0011-00 [I,A]; C09D0011-00 [I,C*]
AB	Title ink comprises at least (A) aqueous pigment, (B) water, (C) water-soluble cationic polymer, and (D) carboxyl-containing organic acid/salt. Thus, 100 g		
of	an ink (pH value 9.7) was prepared by dissolving 5 g of pigment (Direct Black 32) in 50 g ultrapure water, adding 1.5 g polyallylamine (Mw = 2000), 0.5 g acetic acid, and more ultrapure water, and then filtrating with a metal-mesh filter, showing good storage stability, printing glossiness, and ink-jet head reliability, and water resistance of images.		
ST	aq jet ink storage stability; polyallylamine aq jet ink printing glossiness water resistance; acetic acid head reliability ink jet printing		
IT	Inks (jet-printing; preparation of aqueous ink for ink-jet printing)		
IT	50-00-0DP, Formalin, reaction products with polyallylamine and formic acid 64-18-6DP, Formic acid, reaction products with polyallylamine and formalin, uses 30551-89-4DP, Polyallylamine, reaction products with formic acid and formalin 30551-89-4P, Polyallylamine		
	RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)		
IT	(ink containing; preparation of aqueous ink for ink-jet printing)		
	50-21-5, uses 56-81-5, 1,2,3-Propanetriol, uses 57-11-4, Octadecanoic acid, uses 64-19-7, Acetic acid, uses 65-85-0, Benzoic acid, uses 69-72-7, uses 72-17-3, Sodium lactate 79-09-4, Propionic acid, uses 108-01-0, 2-(Dimethylamino)ethanol 111-48-8		
	112-34-5, Diethylene glycol monobutyl ether 141-53-7, Sodium formate 585-88-6, Maltitol 1310-58-3, Potassium hydroxide, uses 9014-85-1, Surfynol 465 14307-43-8, Ammonium tartrate, uses 51807-73-9, Propylamine acetate		
	RL: MOA (Modifier or additive use); USES (Uses)		
	(ink containing; preparation of aqueous ink for ink-jet printing)		
IT	9002-98-6, SP 012 26470-16-6, PAS H 5L 26590-05-6, PAS J 81 32698-04-7, PAS A 1 71550-12-4, Danfix 723		
	RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)		
	(ink containing; preparation of aqueous ink for ink-jet printing)		
IT	61-73-4, C.I. Basic Blue 9 1330-38-7, Direct Blue 86 2580-78-1, Reactive Blue 19 2783-94-0, C.I. Food Yellow 3 3214-47-9, Direct Yellow 50 3875-70-5 5001-72-9, Direct Red 31 6428-38-2, Direct Black 32 8005-03-6, C.I. Acid Black 2 12224-98-5, C.I. Pigment Red 81 15876-56-9, Solvent Yellow 15		
	RL: TEM (Technical or engineered material use); USES (Uses)		
	(pigment, ink containing; preparation of aqueous ink for ink-jet printing)		
L9	ANSWER 26 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN		
AN	1999:219915 CAPLUS		
DN	130:249136		
ED	Entered STN: 08 Apr 1999		
TI	Amino acid sequencing of proteins or peptides from the carboxy terminus using an acid anhydride to generate oxazolone derivatives		
IN	Tsugita, Akira; Takamoto, Keiji; Ataka, Tatsuaki; Sakuhara, Toshihiko; Uchida, Toyooki		

PA Seiko Instruments Inc., Japan
 SO Eur. Pat. Appl., 72 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM G01N033-68
 ICS C07K001-12
 CC 9-16 (Biochemical Methods)
 Section cross-reference(s): 34
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 905519	A1	19990331	EP 1997-306936	1997/0908
	EP 905519	B1	20050525		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
PRAI	EP 1997-306936		19970908		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	EP 905519	ICM	G01N033-68
		ICS	C07K001-12
		IPCI	G01N0033-68 [ICM,6]; C07K0001-12 [ICS,6]; C07K0001-00 [ICS,6,C*]
		IPCR	C07K0001-00 [I,C*]; C07K0001-12 [I,A]; G01N0033-68 [I,C*]; G01N0033-68 [I,A]
		ECLA	C07K001/12; G01N033/68A4B
AB	In a C-terminal amino acid sequencing method, a carboxy-terminal amino acid of a protein or a peptide is liberated by reacting the protein or peptide with an acid anhydride to convert the carboxy terminal amino acid residue into an oxazolone derivative and releasing the derivatized amino acid residue with an acid and alc., the released amino acid is isolated and identified, and the steps are repeated. The method was tested using the peptide Leu-Trp-Met-Arg-Phe, acetic anhydride in the presence of acetic acid, and pentafluoropropionic acid and methanol or heptafluorobutyric acid and ethanol. HPLC and mass spectrometry were used in the anal.		
ST	carboxy terminal protein sequencing acid anhydride oxazolone		
IT	Alcohols, uses		
	RL: NUU (Other use, unclassified); USES (Uses) (acid and, in release of derivatized amino acid; carboxy terminus amino acid sequencing of proteins or peptides using acid anhydrides to generate oxazolone derivs.)		
IT	Acids, uses		
	RL: NUU (Other use, unclassified); USES (Uses) (alcs. and, in release of derivatized amino acid; carboxy terminus amino acid sequencing of proteins or peptides using acid anhydrides to generate oxazolone derivs.)		
IT	HPLC		
	Mass spectrometry Protein sequence analysis (carboxy terminus amino acid sequencing of proteins or peptides using acid anhydrides to generate oxazolone derivs.)		
IT	Anhydrides		
	RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses) (carboxy terminus amino acid sequencing of proteins or peptides using acid anhydrides to generate oxazolone derivs.)		
IT	Peptides, reactions		
	RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent) (carboxy terminus amino acid sequencing of proteins or peptides using acid anhydrides to generate oxazolone derivs.)		
IT	Proteins, general, reactions		

RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(carboxy terminus amino acid sequencing of proteins or peptides using
acid anhydrides to generate oxazolone derivs.)

IT Amines, uses
Esters, uses
RL: NUU (Other use, unclassified); USES (Uses)
(in release of derivatized amino acid; carboxy terminus amino acid
sequencing of proteins or peptides using acid anhydrides to generate
oxazolone derivs.)

IT 64-17-5, Ethanol, uses
RL: NUU (Other use, unclassified); USES (Uses)
(acid and, in release of derivatized amino acid; carboxy terminus amino
acid sequencing of proteins or peptides using acid anhydrides to
generate oxazolone derivs.)

IT 67-56-1, Methanol, reactions
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or
reagent); USES (Uses)
(acid and, in release of derivatized amino acid; carboxy terminus amino
acid sequencing of proteins or peptides using acid anhydrides to
generate oxazolone derivs.)

IT 64-18-6D, Formic acid, halogenated, esters, reactions 108-24-7
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or
reagent); USES (Uses)
(carboxy terminus amino acid sequencing of proteins or peptides using
acid anhydrides to generate oxazolone derivs.)

IT 16305-75-2 67201-39-2 216297-50-6
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(carboxy terminus amino acid sequencing of proteins or peptides using
acid anhydrides to generate oxazolone derivs.)

IT 375-22-4, Heptafluorobutyric acid
RL: NUU (Other use, unclassified); USES (Uses)
(ethanol and, in release of derivatized amino acid; carboxy terminus
amino acid sequencing of proteins or peptides using acid anhydrides to
generate oxazolone derivs.)

IT 221676-64-8
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation,
nonpreparative)
(formation of; carboxy terminus amino acid sequencing of proteins or
peptides using acid anhydrides to generate oxazolone derivs.)

IT 64-19-7, Acetic acid, uses
RL: NUU (Other use, unclassified); USES (Uses)
(in presence of; carboxy terminus amino acid sequencing of proteins or
peptides using acid anhydrides to generate oxazolone derivs.)

IT 7732-18-5, Water, uses
RL: NUU (Other use, unclassified); USES (Uses)
(in release of derivatized amino acid; carboxy terminus amino acid
sequencing of proteins or peptides using acid anhydrides to generate
oxazolone derivs.)

IT 108-01-0, 2-Dimethylaminoethanol
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
(in release of derivatized amino acid; carboxy terminus amino acid
sequencing of proteins or peptides using acid anhydrides to generate
oxazolone derivs.)

IT 422-64-0, Pentafluoropropionic acid
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or
reagent); USES (Uses)
(methanol and, in release of derivatized amino acid; carboxy terminus
amino acid sequencing of proteins or peptides using acid anhydrides to
generate oxazolone derivs.)

IT 378-75-6P, Methylpentafluoropropionate
RL: NUU (Other use, unclassified); RCT (Reactant); SPN (Synthetic
preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of, for use in release of derivatized amino acid; carboxy terminus amino acid sequencing of proteins or peptides using acid anhydrides to generate oxazolone derivs.)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Bailey, M; US 5180807 A CAPLUS
- (2) Bailey, M; TECH PROTEIN CHEM 3, ` PAP ANNU SYMP PROTEIN SOC 1992, V5TH, P12
- (3) Basu, G; BIOPOLYMERS 1991, V31(14), P1763 CAPLUS
- (4) Boyd, L; US 5468843 A CAPLUS
- (5) Boyd, L; WO 9503066 A CAPLUS
- (6) Kurabo Ind; JP 06027113 A CAPLUS
- (7) Kurabo Ind; JP 06027113 A 1994 CAPLUS

L9 ANSWER 27 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1998:351635 CAPLUS

DN 129:101910

OREF 129:20837a,20840a

ED Entered STN: 10 Jun 1998

TI Electrostatographic toner and two component electrophotographic developer

IN Miyajima, Koichiro; Fujimori, Yoshihisa

PA Toyo Ink Mfg. Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03G009-08

ICS G03G009-087; G03G015-08

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10148962	A	19980602	JP 1996-306044	19961118
PRAI	JP 1996-306044		19961118		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 10148962	ICM	G03G009-08
	ICS	G03G009-087; G03G015-08
	IPCI	G03G0009-08 [ICM,6]; G03G0009-087 [ICS,6]; G03G0015-08 [ICS,6]
	IPCR	G03G0009-08 [I,C*]; G03G0009-08 [I,A]; G03G0009-087 [I,C*]; G03G0009-087 [I,A]; G03G0015-08 [I,C*]; G03G0015-08 [I,A]

AB The electrostatog. toner comprises a coloring resin containing a colorant and a binder, and fine powder having a smaller average diameter than the coloring resin's, wherein the fine powder is prepared by a multi-step soap-free polymerization and has 3.6-6.8 pH. An alkylacrylate and/or an alkylmethacrylate

are polymerized or copolymd. before the last polymerization step and a polymerizable

carboxylic acid or a polymerizable carboxylic acid salt is polymerized in the last polymerization step. The toner provides the stable charge for long time under different environments and especially the charge-up prevention at low temperature to eliminate the decrease of the image contrast and the fogging.

ST electrostatog toner electrophotog developer fine powder

IT Electrophotographic toners
(two-component developer toners; toner and two component electrophotog. developer)

IT 9011-14-7P, Poly(methylmethacrylate) 25322-25-2P, Acrylic acid-methylmethacrylate copolymer 26950-79-8P, Methacrylic acid-methylmethacrylate copolymer sodium salt

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (fine powder for electrostatog. toner)
 IT 64-18-6, Formic acid, uses 79-10-7, Acrylic acid, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (fine powder for electrostatog. toner)
 IT 108-01-0, Dimethylaminoethanol 142-72-3, Magnesium acetate
 557-34-6, Zinc acetate 2638-94-0, Azobiscyanovaleric acid
 RL: TEM (Technical or engineered material use); USES (Uses)
 (toner and two component electrophotog. developer)

L9 ANSWER 28 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1997:502724 CAPLUS
 DN 127:163170
 OREF 127:31615a,31618a
 ED Entered STN: 09 Aug 1997
 TI Coating methods without intermediate compositions on electrodeposited
 substrates
 IN Horibe, Kyoichi; Haneishi, Hidehiko; Mitsuji, Masaru; Yabuta, Motoshi;
 Okumura, Yasumasa
 PA Kansai Paint Co., Ltd., Japan
 SO Eur. Pat. Appl., 35 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM B05D007-00
 ICS C09D005-44; C08G018-10
 CC 42-2 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 55

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 785034	A1	19970723	EP 1997-100801	19970120
EP 785034	B1	20021106		
R: DE, GB				
JP 09192588	A	19970729	JP 1996-26244	19960122
JP 3796286	B2	20060712		
US 5756221	A	19980526	US 1997-785600	19970117
CA 2195607	A1	19970723	CA 1997-2195607	19970121
PRAI JP 1996-26244	A	19960122		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 785034	ICM	B05D007-00
	ICS	C09D005-44; C08G018-10
	IPCI	B05D0007-00 [I,C*]; C09D0005-44 [ICS,6]; C08G0018-10 [ICS,6]; C08G0018-00 [ICS,6,C*]
	IPCR	B05D0001-36 [I,C*]; B05D0001-36 [I,A]; B05D0003-02 [I,C*]; B05D0003-02 [I,A]; B05D0003-10 [I,C*]; B05D0003-10 [I,A]; B05D0005-00 [I,C*]; B05D0005-00 [I,A]; B05D0007-00 [I,C*]; B05D0007-00 [I,A]; B05D0007-24 [I,C*]; B05D0007-24 [I,A]; C08G0018-00 [I,C*]; C08G0018-58 [I,A]; C09D0005-44 [I,C*]; C09D0005-44 [I,A]
JP 09192588	ECLA	B05D007/00N3C6; C08G018/58; C08G018/58F; C09D005/44E
	IPCI	B05D0001-36 [I,A]; B05D0007-24 [I,A]; C09D0005-44 [I,A]
	IPCR	B05D0001-36 [I,C*]; B05D0001-36 [I,A]; B05D0003-02 [I,C*]; B05D0003-02 [I,A]; B05D0003-10 [I,C*]; B05D0003-10 [I,A]; B05D0005-00 [I,C*]; B05D0005-00 [I,A]; B05D0007-00 [I,C*]; B05D0007-00 [I,A]; B05D0007-24 [I,C*]; B05D0007-24 [I,A]; C08G0018-00 [I,C*]; C08G0018-58 [I,A]; C09D0005-44 [I,C*];

US 5756221 ECLA C09D0005-44 [I,A]
 IPCI B05D007/00N3C6; C08G018/58; C08G018/58F; C09D005/44E
 IPCR C25D0013-06 [ICM,6]; C25D0013-04 [ICM,6,C*]
 B05D0001-36 [I,C*]; B05D0001-36 [I,A]; B05D0003-02 [I,C*]; B05D0003-02 [I,A]; B05D0003-10 [I,C*]; B05D0003-10 [I,A]; B05D0005-00 [I,C*]; B05D0005-00 [I,A]; B05D0007-00 [I,C*]; B05D0007-00 [I,A]; B05D0007-24 [I,C*]; B05D0007-24 [I,A]; C08G0018-00 [I,C*]; C08G0018-58 [I,A]; C09D0005-44 [I,C*]; C09D0005-44 [I,A]

CA 2195607 NCL 428/626.000; 204/488.000; 204/501.000; 428/416.000
 ECLA B05D007/00N3C6; C08G018/58; C08G018/58F; C09D005/44E
 IPCI C09D0005-44 [ICM,6]; C25D0013-00 [ICS,6]
 IPCR B05D0001-36 [I,C*]; B05D0001-36 [I,A]; B05D0003-02 [I,C*]; B05D0003-02 [I,A]; B05D0003-10 [I,C*]; B05D0003-10 [I,A]; B05D0005-00 [I,C*]; B05D0005-00 [I,A]; B05D0007-00 [I,C*]; B05D0007-00 [I,A]; B05D0007-24 [I,C*]; B05D0007-24 [I,A]; C08G0018-00 [I,C*]; C08G0018-58 [I,A]; C09D0005-44 [I,C*]; C09D0005-44 [I,A]

AB Automotive coating films having superior finish appearance, corrosion resistance, weatherability, chipping resistance, acid resistance, abrasion resistance, etc., are formed simply. The coating method comprises applying, onto a substrate, a cationic electrodepositable coating composition comprising (A) a polyurethane-modified epoxy resin-amine adduct, obtained by a reaction of (A-1) a polyurethane compound having 1 terminal isocyanate group, obtained by a reaction of (a) a polyhydroxy compound having a number-average mol. weight 50-8000, (b) a polyisocyanate compound, and (c) a compound having 1 active H atom; (A-2) a bisphenol-type epoxy resin having ≥ 2 epoxy groups; and (A-3) an active-H-containing amine compound, and (B) a nonionic film-forming resin, at weight ratio (A)/(B) (15-95) : (5-85) and the coating composition comprising substantially no pigment, then heat-curing the formed electrocoating film, and applying an aqueous coating composition comprising a metallic pigment and/or a coloring pigment and a high-solid-content coating composition comprising (C) a carboxyl group-containing compound, (D) a vinyl type polymer containing an epoxy group, a hydroxyl group and a hydrolyzable alkoxysilyl group, (E) a reactive organopolysiloxane, and (F) crosslinked polymer fine particles, but comprising substantially no pigment, by 2-coat 2-bake or by 2-coat 1-bake process. A Zn phosphated Fe plate was first electrodeposited with a composition containing the adduct of isophorone diisocyanate-Placel 208 prepolymer with bisphenol A diglycidyl ether polymer 52, Bu methacrylate-hydroxyethyl methacrylate-FM-3X-styrene copolymer 23, blocked isocyanate crosslinker 25, polypropylene glycol 1 g, formic acid, Pb acetate, Pb silicate, Bu2SnO, C, TiO2, and surfactant as an emulsion, and cured to give an electrocoated plate. Over the electrocoated plate was coated aqueous base coat containing acrylic acid-Bu acrylate-2-hydroxyethyl methacrylate-Me methacrylate-styrene copolymer dimethylaminoethanol salt solution 40, Bu acrylate-2-ethylhexyl acrylate-2-hydroxyethyl acrylate-methacrylic acid-Me methacrylate-styrene copolymer dimethylaminoethanol salt solution 275, amino resin crosslinker 25, Al paste 20, and solvent 273 parts and a high-solid-content acrylic top coat containing hexahydrophthalic anhydride-3-methyl-1,5-pentanediol-trimethylolpropane copolymer, Bu acrylate-glycidyl methacrylate-4-hydroxybutyl acrylate-3-methacryloxypropyltrimethoxysilane-styrene copolymer, X41-1067 reactive siloxane, and crosslinked beads in a 2-coat-2-bake (80, 150°) process to give a finish coat having good surface appearance and weatherability.

ST automotive coating film; two coat bake process automotive coating; polyurethane electrocoating two coat bake process; aq pigmented base coat

automotive coating; high solid top coat automotive coating

IT Polysiloxanes, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (Me methoxy, glycidyl group-containing, in high-solid-content acrylic top coat; in manufacture of weatherable automotive coating finish using two coat bake process over electrocoated metal substrate)

IT Polyesters, uses
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (acrylic, high-solid-content top coat; in manufacture of weatherable automotive coating finish using two coat bake process over electrocoated metal substrate)

IT Polyurethanes, preparation
 Polyurethanes, preparation
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
 (epoxy, electrocoat; in manufacture of weatherable automotive coating finish using two coat bake process over electrocoated metal substrate)

IT Polyoxymethylenes, uses
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (in electrocoat; in manufacture of weatherable automotive coating finish using two coat bake process over electrocoated metal substrate)

IT Epoxy resins, preparation
 Epoxy resins, preparation
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
 (polyurethane-, electrocoat; in manufacture of weatherable automotive coating finish using two coat bake process over electrocoated metal substrate)

IT Coating process
 (two-layer-one-bake; in manufacture of weatherable automotive coating finish using two coat bake process over electrocoated metal substrate)

IT 72065-17-9 193608-46-7
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (aqueous pigmented base coat; in manufacture of weatherable automotive coating finish using two coat bake process over electrocoated metal substrate)

IT 25085-99-8DP, Bisphenol A diglycidyl ether polymer, reaction product with polyurethane 112363-56-1P 146115-98-2DP, reaction product with epoxy resin
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
 (electrocoat; in manufacture of weatherable automotive coating finish using two coat bake process over electrocoated metal substrate)

IT 25322-69-4, Polypropylene glycol
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (in electrocoat; in manufacture of weatherable automotive coating finish using two coat bake process over electrocoated metal substrate)

IT 191171-40-1 193608-50-3
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (in high-solid-content acrylic top coat; in manufacture of weatherable automotive coating finish using two coat bake process over electrocoated metal substrate)

ED Entered STN: 22 Dec 1995
 TI Preparation and formulation of N-benzylaminoacyl-4-phenoxyazetidinones for treatment of lung disease (cystic fibrosis).
 IN Davies, Philip
 PA Merck and Co., Inc., USA
 SO PCT Int. Appl., 97 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A61K038-00
 ICS A61K031-395
 CC 2/-5 (Heterocyclic Compounds (One Hetero Atom))
 Section cross-reference(s): 1, 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9524207	A1	19950914	WO 1995-US2938	19950307
	W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, JP, KG, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TT, UA, US, UZ				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2184385	A1	19950914	CA 1995-2184385	19950307
	AU 9520994	A	19950925	AU 1995-20994	19950307
	AU 686780	B2	19980212		
	EP 755262	A1	19970129	EP 1995-913618	19950307
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
	JP 09510212	T	19971014	JP 1995-523641	19950307
PRAI	US 1994-212420	A	19940311		
	WO 1995-US2938	W	19950307		

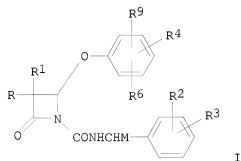
CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	WO 9524207	ICM	A61K038-00
		ICS	A61K031-395
		IPCI	A61K0038-00 [ICM,6]; A61K0031-395 [ICS,6]
		IPCR	C07D0205-00 [I,C*]; C07D0205-08 [I,A]; A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-397 [I,C*]; A61K0031-397 [I,A]; A61K0031-40 [I,C*]; A61K0031-40 [I,A]; A61K0031-4427 [I,C*]; A61K0031-4427 [I,A]; A61K0031-443 [I,A]; A61K0031-445 [I,C*]; A61K0031-445 [I,A]; A61K0031-495 [I,C*]; A61K0031-495 [I,A]; A61K0038-00 [I,C*]; A61K0038-00 [I,A]; A61K0038-17 [I,C*]; A61K0038-17 [I,A]; A61P0009-00 [I,C*]; A61P0009-08 [I,A]; A61P0009-10 [I,A]; A61P0011-00 [I,C*]; A61P0011-00 [I,A]; A61P0011-10 [I,A]; A61P0011-14 [I,A]; A61P0029-00 [I,C*]; A61P0029-00 [I,A]; A61P0031-00 [I,C*]; A61P0031-04 [I,A]; A61P0033-00 [I,C*]; A61P0033-02 [I,A]; C07D0401-00 [I,C*]; C07D0401-12 [I,A]; C07D0403-00 [I,C*]; C07D0403-12 [I,A]; C07D0405-00 [I,C*]; C07D0405-06 [I,A]
		ECLA	A61K038/17A2+M
CA 2184385		IPCI	A61K0038-16 [ICM,6]; A61K0031-395 [ICS,6]
		IPCR	C07D0205-00 [I,C*]; C07D0205-08 [I,A]; A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-397 [I,C*]; A61K0031-397 [I,A]; A61K0031-40 [I,C*]; A61K0031-40 [I,A]; A61K0031-4427 [I,C*]; A61K0031-4427 [I,A]; A61K0031-443 [I,A]; A61K0031-445 [I,C*]; A61K0031-445 [I,A]; A61K0031-495 [I,C*]; A61K0031-495 [I,A]; A61K0038-00 [I,C*]; A61K0038-00 [I,A]; A61K0038-17

		[I,C*]; A61K0038-17 [I,A]; A61P0009-00 [I,C*]; A61P0009-08 [I,A]; A61P0009-10 [I,A]; A61P0011-00 [I,C*]; A61P0011-00 [I,A]; A61P0011-10 [I,A]; A61P0011-14 [I,A]; A61P0029-00 [I,C*]; A61P0029-00 [I,A]; A61P0031-00 [I,C*]; A61P0031-04 [I,A]; A61P0033-00 [I,C*]; A61P0033-02 [I,A]; C07D0401-00 [I,C*]; C07D0401-12 [I,A]; C07D0403-00 [I,C*]; C07D0403-12 [I,A]; C07D0405-00 [I,C*]; C07D0405-06 [I,A]
AU 9520994	IPCI	A61K0038-00 [ICM,6]; A61K0031-395 [ICS,6]
	IPCR	C07D0205-00 [I,C*]; C07D0205-08 [I,A]; A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-397 [I,C*]; A61K0031-397 [I,A]; A61K0031-40 [I,C*]; A61K0031-40 [I,A]; A61K0031-4427 [I,C*]; A61K0031-4427 [I,A]; A61K0031-443 [I,A]; A61K0031-445 [I,C*]; A61K0031-445 [I,A]; A61K0031-495 [I,C*]; A61K0031-495 [I,A]; A61K0038-00 [I,C*]; A61K0038-00 [I,A]; A61K0038-17 [I,C*]; A61K0038-17 [I,A]; A61P0009-00 [I,C*]; A61P0009-08 [I,A]; A61P0009-10 [I,A]; A61P0011-00 [I,C*]; A61P0011-00 [I,A]; A61P0011-10 [I,A]; A61P0011-14 [I,A]; A61P0029-00 [I,C*]; A61P0029-00 [I,A]; A61P0031-00 [I,C*]; A61P0031-04 [I,A]; A61P0033-00 [I,C*]; A61P0033-02 [I,A]; C07D0401-00 [I,C*]; C07D0401-12 [I,A]; C07D0403-00 [I,C*]; C07D0403-12 [I,A]; C07D0405-00 [I,C*]; C07D0405-06 [I,A]
	ECLA	A61K038/17A2+M
EP 755262	IPCI	A61K0038-00 [ICM,6]; A61K0031-395 [ICS,6]
	IPCR	C07D0205-00 [I,C*]; C07D0205-08 [I,A]; A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-397 [I,C*]; A61K0031-397 [I,A]; A61K0031-40 [I,C*]; A61K0031-40 [I,A]; A61K0031-4427 [I,C*]; A61K0031-4427 [I,A]; A61K0031-443 [I,A]; A61K0031-445 [I,C*]; A61K0031-445 [I,A]; A61K0031-495 [I,C*]; A61K0031-495 [I,A]; A61K0038-00 [I,C*]; A61K0038-00 [I,A]; A61K0038-17 [I,C*]; A61K0038-17 [I,A]; A61P0009-00 [I,C*]; A61P0009-08 [I,A]; A61P0009-10 [I,A]; A61P0011-00 [I,C*]; A61P0011-00 [I,A]; A61P0011-10 [I,A]; A61P0011-14 [I,A]; A61P0029-00 [I,C*]; A61P0029-00 [I,A]; A61P0031-00 [I,C*]; A61P0031-04 [I,A]; A61P0033-00 [I,C*]; A61P0033-02 [I,A]; C07D0401-00 [I,C*]; C07D0401-12 [I,A]; C07D0403-00 [I,C*]; C07D0403-12 [I,A]; C07D0405-00 [I,C*]; C07D0405-06 [I,A]
	ECLA	A61K038/17A2+M
JP 09510212	IPCI	A61K0038-00 [ICM,6]; A61K0031-395 [ICS,6]; A61K0031-40 [ICS,6]; A61K0031-445 [ICS,6]; A61K0031-495 [ICS,6]; C07D0205-08 [ICS,6]; C07D0205-00 [ICS,6,C*]; C07D0401-12 [ICS,6]; C07D0401-00 [ICS,6,C*]; C07D0403-12 [ICS,6]; C07D0403-00 [ICS,6,C*]; C07D0405-06 [ICS,6]; C07D0405-00 [ICS,6,C*]; C07D0205-00 [I,C*]; C07D0205-08 [I,A]; A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-397 [I,C*]; A61K0031-397 [I,A]; A61K0031-40 [I,C*]; A61K0031-40 [I,A]; A61K0031-4427 [I,C*]; A61K0031-4427 [I,A]; A61K0031-443 [I,A]; A61K0031-445 [I,C*]; A61K0031-445 [I,A]; A61K0031-495 [I,C*]; A61K0031-495 [I,A]; A61K0038-00 [I,C*]; A61K0038-00 [I,A]; A61K0038-17 [I,C*]; A61K0038-17 [I,A]; A61P0009-00 [I,C*]; A61P0009-08 [I,A]; A61P0009-10 [I,A]; A61P0011-00 [I,C*]; A61P0011-00 [I,A]; A61P0011-10 [I,A]; A61P0011-14 [I,A]; A61P0029-00 [I,C*]; A61P0029-00

[I,A]; A61P0031-00 [I,C*]; A61P0031-04 [I,A];
 A61P0033-00 [I,C*]; A61P0033-02 [I,A]; C07D0401-00
 [I,C*]; C07D0401-12 [I,A]; C07D0403-00 [I,C*];
 C07D0403-12 [I,A]; C07D0405-00 [I,C*]; C07D0405-06
 [I,A]

OS MARPAT 124:117073
 GI



- AB A pharmaceutical composition comprising a therapeutically effective, nontoxic amount of an (F)-actin shortening protein, a therapeutically effective amount of an elastase inhibitor, and a pharmaceutically acceptable carrier is claimed. More specifically, the protein is gelsolin and the elastase inhibitor is a title compound [I; R = alkyl; R1 = alkyl, alkoxyalkyl; M = H, alkyl, hydroxyalkyl, haloalkyl, alkenyl, alkoxyalkyl; Ra, Rb = H; R2, R3 = H, alkyl, halo, alkoxy; R2R3 = atoms to form a methylenedioxy group, furan ring; R4 = QCOYNR7R8; Q = bond; Y = NR9(CHR12)nCR10R11; R9-R12 = H, alkyl; R7, R8 = H, alkyl, alkoxyalkyl, hydroxyalkyl; n = 1-5; R8R9 = atoms to form a mono- or disubstituted heterocycle]. Compns. containing [S-(R*, S*)]-2-[4-[[[(4-methyl)piperazin-1-yl]carbonyl]phenoxy]-3,3-diethyl-N-[1-(3,4-methylenedioxyphenyl)butyl]-4-oxo-1-azetidinecarboxamide are claimed, as is a method for treating a patient with lung disease with the claimed compns. with amts. sufficient to return lung function to 75-90% of normal as measured by FEV1.
- ST benzylaminoacylphenoxyazetidinone prepn lung disease treatment; sputum viscosity redn benzylaminoacylphenoxyazetidinone gelsolin; cystic fibrosis treatment benzylaminoacylphenoxyazetidinone gelsolin
- IT Cystic fibrosis
 Lung, disease
 (treatment; preparation and formulation of
 N-benzylaminoacyl-4-phenoxyazetidinones with gelsolin for treatment of lung disease)
- IT Proteins, specific or class
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (gelsolins, preparation and formulation of
 N-benzylaminoacyl-4-phenoxyazetidinones with gelsolin for treatment of lung disease)
- IT 9004-06-2, Elastase
 RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study)
 (inhibitors; preparation and formulation of
 N-benzylaminoacyl-4-phenoxyazetidinones with gelsolin for treatment of lung disease)
- IT 157341-09-8P 157341-10-1P 157341-11-2P 157341-12-3P 157341-13-4P

157341-14-5P	157341-15-6P	157341-16-7P	157341-17-8P	157341-18-9P
157341-19-0P	157341-20-3P	157341-21-4P	157341-22-5P	157341-23-6P
157341-24-7P	157341-25-8P	157341-26-9P	157341-27-0P	157341-28-1P
157341-29-2P	157341-30-5P	157341-31-6P	157341-32-7P	157341-34-9P
157341-40-7P	157341-41-8P	157341-43-0P	157341-44-1P	157341-45-2P
157341-46-3P	157341-48-5P	157343-04-9P	157343-05-0P	157343-06-1P
157343-08-3P	157343-09-4P	157343-10-7P	157343-11-8P	157343-14-1P
157343-15-2P	157343-16-3P	157343-18-5P	157343-19-6P	157343-20-9P
157343-21-0P	157343-22-1P	157343-23-2P	157343-24-3P	157343-25-4P
157343-26-5P	157343-27-6P	157343-28-7P	157343-29-8P	157343-30-1P
157343-34-5P	157343-35-6P	157343-36-7P	157343-37-8P	157343-38-9P
157343-39-0P	157343-40-3P	157343-41-4P	157343-42-5P	157343-43-6P
157343-44-7P	157343-45-8P	157343-47-0P	157343-48-1P	157343-49-2P
157343-50-5P	157343-52-7P	157343-53-8P	157343-54-9P	157343-55-0P
157343-56-1P	157343-57-2P	157343-58-3P	157343-59-4P	157343-60-7P
157343-61-8P	157343-62-9P	157343-63-0P	157343-64-1P	157343-65-2P
157343-66-3P	157343-68-5P	157343-69-6P	157343-70-9P	157343-72-1P
157343-73-2P	157343-74-3P	157343-76-5P	157343-77-6P	157343-78-7P
157343-80-1P	157381-58-3P	157382-05-3P	157385-25-6P	159120-97-5P
172900-37-7P	172900-38-8P	172900-39-9P	172900-40-2P	172900-41-3P
172900-42-4P	172900-43-5P	172900-44-6P	172900-45-7P	172900-46-8P
172900-48-0P	172900-49-1P	173007-16-4P	173007-17-5P	

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation and formulation of N-benzylaminoacyl-4-phenoxyazetidinones with gelsolin for treatment of lung disease)

IT 100-46-9, Benzylamine, reactions 102-11-4,
N-Benzyl-N,N'-dimethylethylenediamine 103-76-4,
N-(2-Hydroxyethyl)piperazine 107-14-2, Chloroacetonitrile 108-00-9,
N,N-Dimethylethylenediamine 108-01-0, N,N-Dimethylaminoethanol
109-01-3, N-Methylpiperazine 109-89-7, Diethylamine, reactions
109-94-4, Ethyl formate 111-42-2, Diethanolamine, reactions
123-75-1, Pyrrolidine, reactions 142-25-6,
N,N,N'-Trimethylethylenediamine 500-22-1, Pyridine-3-carboxaldehyde
505-66-8, Homopiperazine 3099-31-8, 3-Picolyl chloride 5292-43-9,
tert-Butyl bromoacetate 6404-31-5 27578-60-5,
1-(2-Aminoethyl)piperidine 31166-44-6, N-Benzylloxycarbonylpiperazine
41324-66-7, Proline benzyl ester 56777-24-3, Benzyl L-lactate
57260-71-6, N-tert-Butoxycarbonylpiperazine 127063-07-4 139256-79-4
157341-52-1 172900-50-4 172900-51-5 172900-52-6 172900-53-7

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation and formulation of N-benzylaminoacyl-4-phenoxyazetidinones with gelsolin for treatment of lung disease)

IT 26331-21-5P 51388-00-2P 54714-50-0P 90727-50-7P 118808-13-2P
136470-00-3P 144243-45-8P 157341-38-3P 157341-39-4P 157341-50-9P
172900-47-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and formulation of N-benzylaminoacyl-4-phenoxyazetidinones with gelsolin for treatment of lung disease)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Anon; EP 0337549 A1 CAPLUS
- (2) Anon; EP 0481671 A1 CAPLUS
- (3) Anon; US 5260224 A CAPLUS
- (4) Anon; US 5276139 A CAPLUS

L9 ANSWER 30 OF 55 CAPLUS COPYRIGHT 2019 ACS ON STN

AN 1994:482440 CAPLUS

DN 121:82440

OREF 121:14797a,14800a

ED Entered STN: 20 Aug 1994

TI Kinetics and products of the gas-phase reactions of O3 with amines and related compounds

AU Tuazon, E.C.; Atkinson, R.; Aschmann, S.M.; Arey, J.

CS Statewide Air Pollut. Res. Cent., Univ. California, Riverside, CA, 92521, USA

SO Research on Chemical Intermediates (1994), 20(3-5), 303-20
CODEN: RCINEE; ISSN: 0922-6168

DT Journal

LA English

CC 22-13 (Physical Organic Chemistry)
Section cross-reference(s): 59

AB The kinetics and products of the gas-phase reactions of O3 with a series of aliphatic amines and related compds. have been investigated at 298 ± 2 K and 740 Torr total pressure of air. The absolute rate consts. obtained (in $\text{cm}^3 \text{mol}^{-1} \text{s}^{-1}$ units) were: methylamine, $(7.4 \pm 2.4) \times 10^{-21}$; dimethylamine, $(1.67 \pm 0.20) \times 10^{-18}$; trimethylamine, $(7.84 \pm 0.87) \times 10^{-18}$; 2-(dimethylamino)ethanol, $(6.76 \pm 0.83) \times 10^{-18}$; and tetramethylhydrazine, $(5.21 \pm 0.60) \times 10^{-18}$. The major products observed from the O3 reactions with the use of in situ FT-IR absorption spectroscopy were: from trimethylamine, $(\text{CH}_3)_2\text{NCHO}$, $\text{CH}_3\text{N}:\text{CH}_2$ and HCHO ; and from dimethylamine, $\text{CH}_3\text{N}:\text{CH}_2$, CH_3NO_2 , and HCHO . Possible reaction mechanisms are presented and discussed.

ST ozone reaction amine kinetics mechanism

IT Kinetics, reaction
Reaction mechanism
(of ozone with amines and related compds.)

IT Amines, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, and of related compds., with ozone, kinetics and mechanism of)

IT 50-00-0P, Formaldehyde, preparation 51-80-9P, N,N,N',N'-Tetramethyldiaminomethane 64-18-6P, Formic acid, preparation 68-12-2P, DMF, preparation 75-52-5P, Nitromethane, preparation 123-39-7P, N-Methylformamide 124-38-9P, Carbon dioxide, preparation 1761-67-7P, N-Methylmethylenimine 7732-18-5P, Water, preparation
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in reaction of ozone with amine in gas phase)

IT 10028-15-6, Ozone, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with aliphatic amines and related compds. in gas phase, kinetics and mechanism of)

IT 74-89-5, Methylamine, reactions 6415-12-9, Tetramethylhydrazine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with ozone in gas phase, kinetics of)

IT 75-50-3, Trimethylamine, reactions 108-01-0, 2-(Dimethylamino) ethanol 124-40-3, Dimethylamine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with ozone in gas phase, kinetics of and product study of)

L9 ANSWER 31 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1990:58331 CAPLUS

DN 112:58331

OREF 112:10013a,10016a

ED Entered STN: 17 Feb 1990

TI Cationic electrodeposition coating materials containing aprotic onium salts

IN Iwazawa, Naozumi; Isozaki, Osamu

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C09D005-44
 ICS C09D003-48; C09D005-44; C25D013-06
 CC 42-7 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 55

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01182376	A	19890720	JP 1988-3645	19880111
PRAI	JP 1988-3645		19880111		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 01182376	ICM	C09D005-44
	ICS	C09D003-48; C09D005-44; C25D013-06
	IPCI	C09D0005-44 [ICM,4]; C09D0003-48 [ICS,4]; C09D0005-44 [ICS,4]; C25D0013-06 [ICS,4]; C25D0013-04 [ICS,4,C*]

AB Coating materials curable at low temperature and forming thick coatings contain resins having α,β -unsatd. carbonyl groups and primary or secondary OH groups and aprotic onium group -CHR₂CH₂W+ -O₂CR₁ (R₁ = OH, alkoxy, ester, C1-8 hydrocarbyl groups optionally substituted with halogens, or H; R₂ = H, OH, C1-8 hydrocarbyl groups; W+ = Z+R₃R₄R₅ or Y+R₃R₄; Z = N or P; Y = S; R₃, R₄, and R₅ = C1-14 organic group, heterocyclic ring member. Thus, styrene 20, 2-hydroxyethyl methacrylate 10, Bu acrylate 35, glycidyl methacrylate 35, tert-Bu peroxyoctoate 3 parts were mixed, added during 3 h to 60 parts HOCH₂CH₂OBU at 110°, aged 7 h at 110°, cooled to 250°, mixed with 10.5 parts diethanolamine, heated 2 h at 50-70°, mixed with acrylic acid 10.5, hydroquinone 0.02, and Et₄NBr 0.1 part and heated 4 h at 110° to prepare a resin solution This solution (100 parts) was mixed with rutile 20,

talc

10, and PhCH₂OH 1 part, ball-milled, mixed with a 186:89:90.1 2-ethylhexyl glycidyl ether-dimethylaminoethanol-lactic acid reaction product (I) 10, AcOH 2.5, and H₂O 475 parts, electrodeposited on phosphated steel, and baked at 120° to form a coating.

ST hydroxyvinyl polymer electrodeposition; cationic electrodeposition coating material; aprotic onium salt electrodeposition coating; ammonium salt electrodeposition coating

IT Phosphonium compounds

Quaternary ammonium compounds, uses and miscellaneous Sulfonium compounds

RL: USES (Uses)

(hydroxyvinyl polymers containing, for cationic electrodeposition coating materials)

IT Coating materials

(cationic, electrodeposited, hydroxyvinyl polymers, containing aprotic ammonium salts)

IT Epoxides

RL: USES (Uses)

(reaction products, with amines and carboxylic acids, in cationic electrodeposition coating materials containing hydroxyvinyl polymers)

IT Carboxylic acids, compounds

RL: USES (Uses)

(reaction products, with amines and epoxy resins, in cationic electrodeposition coating materials containing hydroxyvinyl polymers)

IT Amines, compounds

RL: USES (Uses)

(reaction products, with carboxylic acids and epoxy resins, in cationic electrodeposition coating materials containing hydroxyvinyl polymers)

IT 79-10-7D, 2-Propenoic acid, reaction products with dibutylamine and epoxy

resin 108-18-9D, Diisopropylamine, reactions with acrylic and epoxy resin and hydroxyethyl acrylate-isophorone diisocyanate adduct 111-42-2B, reaction products with acrylic acid and epoxy resin 111-92-2D, Dibutylamine, reaction products with acrylic acid and epoxy resin 25068-38-6D, EPIKOTE 1004, reaction products with acrylic acid and diethanolamine 69645-73-4, Acrylic acid-butyl acrylate-glycidyl methacrylate-2-hydroxyethyl methacrylate-methyl methacrylate copolymer 78724-20-6D, reaction products with acrylic acid and diisopropanolamine and epoxy resin 84778-06-3D, EPIKOTE 152, reaction products with acrylic acid and dibutylamine 124996-28-7
RL: USES (Uses)

(cationic electrodeposition coatings, containing aprotic onium salts)
IT 50-21-5D, Lactic acid, reaction products with dimethylaminoethanol and ethylhexyl glycidyl ether 64-18-6D, Formic acid, reaction products with butylene oxide and methyldiethanolamine 64-19-7D, Acetic acid, reaction products with butylene oxide and triethylamine 102-71-6D, Triethanolamine, reaction products with acetic acid and butylene oxide 105-59-9D, reaction products with butylene oxide and formic acid 108-01-0D, reaction products with ethylhexyl glycidyl ether and lactic acid 111-48-8D, β -Thiodiglycol, reaction products with acrylic acid and epoxy resin 603-35-0D, reaction products with acetic acid and epoxy resin 2461-15-6D, 2-Ethylhexyl glycidyl ether, reaction products with dimethylaminoethanol and lactic acid 26249-20-7D, Butylene oxide, reaction products with formic acid and methyldiethanolamine 125062-24-0D, reaction products with dimethylaminoethanol and acetic acid
RL: USES (Uses)

(cationic electrodeposition coatings, containing hydroxyvinyl polymers)

L9 ANSWER 32 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1990:22477 CAPLUS

DN 112:22477

OREF 112:3933a,3936a

ED Entered STN: 21 Jan 1990

TI Curable cationic polymer compositions for coatings

IN Isozaki, Osamu; Iwasawa, Naotumi

PA Kansai Paint Co., Ltd., Japan

SO Ger. Offen., 11 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM C08L101-00

ICS C08L033-04; C08L061-04; C08L063-10; C08L067-06; C08L075-04;

C08J003-24

ICA C08L101-06; C08L033-14

CC 42-10 (Coatings, Inks, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3841413	A1	19890622	DE 1988-3841413	19881208
	DE 3841413	C2	19920430		
	JP 01152110	A	19890614	JP 1987-311652	19871208
	JP 2612457	B2	19970521		
	JP 01152117	A	19890614	JP 1987-311653	19871208
	CA 1338575	C	19960903	CA 1988-584748	19881201
	GB 2213488	A	19890816	GB 1988-28256	19881202
	GB 2213488	B	19911127		
PRAI	JP 1987-311652	A	19871208		
	JP 1987-311653	A	19871208		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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DE 3841413	ICM	C08L101-00
	ICS	C08L033-04; C08L061-04; C08L063-10; C08L067-06; C08L075-04; C08J003-24
	ICA	C08L101-06; C08L033-14
	IPCI	C08L0101-00 [ICM,4]; C08L0033-04 [ICS,4]; C08L0061-04 [ICS,4]; C08L0061-00 [ICS,4,C*]; C08L0063-10 [ICS,4]; C08L0063-00 [ICS,4,C*]; C08L0067-06 [ICS,4]; C08L0067-00 [ICS,4,C*]; C08L0075-04 [ICS,4]; C08L0075-00 [ICS,4,C*]; C08J0003-24 [ICS,4]; C08L0101-06 [ICA,4]; C08L0033-14 [ICA,4]; C08L0033-00 [ICA,4,C*]
	IPCR	C08F0290-00 [I,C*]; C08F0290-14 [I,A]; C08F0299-00 [I,C*]; C08F0299-02 [I,A]; C08J0003-24 [I,C*]; C08J0003-24 [I,A]
	ECLA	C08F290/14; C08F299/02; C08J003/24H
JP 01152110	IPCI	C08F0008-00 [ICM,4]; C08F0004-00 [ICS,4]; C08F0008-30 [ICS,4]; C08F0008-34 [ICS,4]; C08F0008-40 [ICS,4]; C08F0299-00 [ICS,4]; C08J0005-00 [ICS,4]
	IPCR	C08F0004-00 [I,C*]; C08F0004-00 [I,A]; C08F0008-00 [I,C*]; C08F0008-00 [I,A]; C08F0008-30 [I,A]; C08F0008-34 [I,A]; C08F0008-40 [I,A]; C08F0290-00 [I,C*]; C08F0290-00 [I,A]; C08F0299-00 [I,C*]; C08F0299-00 [I,A]; C08G0059-00 [I,C*]; C08G0059-00 [I,A]; C08G0059-17 [I,A]; C08G0063-00 [I,C*]; C08G0063-68 [I,A]; C08G0063-91 [I,A]; C08J0005-00 [I,C*]; C08J0005-00 [I,A]
JP 01152117	IPCI	C08F0299-00 [ICM,4]; C08F0004-00 [ICS,4]; C08J0005-00 [ICS,4]
	IPCR	C08F0004-00 [I,C*]; C08F0004-00 [I,A]; C08F0290-00 [I,C*]; C08F0290-00 [I,A]; C08F0299-00 [I,C*]; C08F0299-00 [I,A]; C08J0005-00 [I,C*]; C08J0005-00 [I,A]; C09D0163-10 [I,C*]; C09D0163-10 [I,A]; C09D0167-06 [I,C*]; C09D0167-07 [I,A]; C09D0175-14 [I,C*]; C09D0175-14 [I,A]; C09D0175-16 [I,A]
CA 1338575	IPCI	C08F0002-50 [ICM,6]; C08F0002-46 [ICM,6,C*]
	IPCR	C08F0290-00 [I,C*]; C08F0290-14 [I,A]; C08F0299-00 [I,C*]; C08F0299-02 [I,A]; C08J0003-24 [I,C*]; C08J0003-24 [I,A]
GB 2213488	IPCI	C08F0008-00 [ICM,4]; C08G0059-14 [ICS,4]; C08G0059-17 [ICS,4]; C08G0059-20 [ICS,4]; C08G0059-00 [ICS,4,C*]; C08F0008-30 [ICA,4]; C08F0008-34 [ICA,4]; C08F0008-40 [ICA,4]
	IPCR	C08F0290-00 [I,C*]; C08F0290-14 [I,A]; C08F0299-00 [I,C*]; C08F0299-02 [I,A]; C08J0003-24 [I,C*]; C08J0003-24 [I,A]
AB	Storage-stable, curable compns. giving water-resistant cured coatings contain polymers bearing polymerizable unsatn. and polymers (which may be the same or different) bearing sulfonium, phosphonium, or quaternary ammonium carboxylate groups. Heating an epoxy resin (Epikote 154) 209, acrylic acid 84, 2,2'-thiodiethanol 31, hydroquinone 0.3, and BuOCH ₂ CH ₂ OH 139 parts at 80° for 3 h gave a 70% solution (Gardner viscosity Z at 25°) of polymer with peak mol. weight 1000, unsatd. group content 3.6 mol/kg, and onium salt content 0.77 mol/kg. Coating this solution (100 µm) on glass or steel and baking 10 min at 120° gave a film with acetone insoly. 89.9% (40°, 8 h) and good water resistance (40°, 7 days).	
ST	onium carboxylate polymer coating; sulfonium carboxylate polymer coating; epoxy resin sulfonium deriv coating; thiodiethanol adduct epoxy coating; acrylic acid adduct coating; water resistance coating; solvent resistance coating	
IT	Phosphonium compounds Quaternary ammonium compounds, polymers	

Sulfonium compounds
 RL: USES (Uses)
 (polymers, coatings containing unsatd. polymers and, storage-stable, manufacture of)
 IT Coating materials
 (water-resistant, onium salt polymers and unsatd. polymers as)
 IT 26007-17-0P 92880-74-5P, Epikote 154 acrylate 124181-01-7P
 124363-46-8P
 RL: PREP (Preparation)
 (coatings containing polymeric onium carboxylates and, storage-stable, manufacture of)
 IT 75-98-9DP, Pivalic acid, reaction products with epoxy resins and pyridine
 25068-38-6DP, reaction products with pivalic acid and pyridine
 RL: PREP (Preparation)
 (coatings containing unsatd. polymers and, storage-stable, manufacture of)
 IT 64-18-6DP, Formic acid, salts with unsatd. quaternary ammonium
 polymers 106-89-8DP, reaction products with poly(ethylene itaconate) and
 pyridine, formate salt 108-01-0DP, reaction products with
 glycidyl methacrylate copolymer and acetic acid 110-86-1DP, Pyridine,
 reaction products with epichlorohydrin and poly(ethylene itaconate),
 formate salt 111-48-8DP, 2,2'-Thiodiethanol, reaction products
 with Epikote 154 acrylate and acrylic acid 26007-17-0DP, Ethylene
 glycol-itaconic acid copolymer, reaction products with epichlorohydrin and
 pyridine, formate salt 92880-74-5DP, Epikote 154 acrylate,
 onium salt derivs., carboxylate salts 124274-17-5P 124363-46-8DP,
 reaction products with (dimethylamino)ethanol and
 acetic acid
 RL: TEM (Technical or engineered material use); PREP (Preparation); USES
 (Uses)
 (coatings, storage-stable, manufacture of)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Anon; US 4338232 A CAPLUS

(2) Anon; US 4857566 A CAPLUS

L9 ANSWER 33 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1987:139229 CAPLUS

DN 106:139229

OREF 106:22731a,22734a

ED Entered STN: 01 May 1987

TI Effect of crosslink density and content of urethane groups in polymer
 matrix on physicomechanical properties of polyurethane foams

AU Zeltina, D.; Gruzins, I.; Zeltins, V.; Alksnis, A.; Zhmud, N. P.;
 Karlivans, V.

CS Inst. Khim. Drev., Riga, USSR

SO Latvijas PSR Zinatnu Akademijas Vestis, Kimijas Serija (1987), (1), 85-9

CODEN: LZAKAM; ISSN: 0002-3248

DT Journal

LA Russian

CC 37-6 (Plastics Manufacture and Processing)

AB The physicochem. properties of polyurethane (PU) foams, based on
 polyisocyanate B and Rianol (glycerol-oxalic acid copolymers), were
 studied as a function of crosslink d. and urethane group content (c) of
 the PU matrix. The softening temperature (Ts) and compressive strength
 (σc) of foams increased with increasing crosslink d. for PU with c
 ≤5.25 mequiv/g and decreased with increasing crosslink d. for PU
 with c >5.25 mequiv/g due to partial thermal degradation of the PU matrix
 during foam preparation. The increase of pH of PU foams after hydrolytic aging
 in 1:1 glycerol-H2O mixture was due to the decrease in concentration of
 hydrolytically unstable methylene formate side groups in the
 polymer matrix. The high pH of PU foams after hydrolytic aging decreased

the corrosion of metals thermally insulated with PU foams.

ST polyurethane foam property crosslink density

IT Urethane polymers, properties

RL: PRP (Properties)

(cellular, physicomech. properties of Rianol, effects of crosslink d. and urethane group content on)

IT Crosslinking

(d., of polyurethane foams, physicomech. properties in relation to)

IT Siloxanes and Silicones, uses and miscellaneous

RL: USES (Uses)

(foam regulators, for polyurethane foams)

IT Blowing agents

(trichlorotrifluoroethane, for polyurethane foams)

IT 76-13-1, Freon 113

RL: USES (Uses)

(blowing agent, for polyurethane foams)

IT 56-81-5D, polymers with oxalic acid and polyisocyanates 75-13-8D, isocyanic acid, esters, polymers with glycerol and oxalic acid 144-62-7D, polymers with glycerol and polyisocyanates

RL: USES (Uses)

(cellular, physicomech. properties of Rianol, effects of crosslink d. and urethane group content on)

IT 108-01-0, 2-(Dimethylamino)ethanol 115-96-8

2641-56-7

RL: USES (Uses)

(polyurethane foam containing, physicomech. properties of)

L9 ANSWER 34 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1983:454575 CAPLUS

DN 99:54575

OREF 99:8534h,8535a

ED Entered STN: 12 May 1984

TI Acrylate-modified melamine resin which is stable on storage and its use

IN Adam, Wilhelm; Wagner, Curt A.; Konrad, Renate; Engelhardt, Friedrich; Riegel, Ulrich; Eckhardt, Georg W.; Piesch, Steffen

PA Cassella A.-G., Fed. Rep. Ger.

SO U.S., 7 pp. Cont.-in-part of U.S. Ser. No. 185,165, abandoned.

CODEN: USXXAM

DT Patent

LA English

IC C08L061-28; C08L061-32

INCL 524512000

CC 37-6 (Plastics Manufacture and Processing)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4378446	A	19830329	US 1981-266486	19810522
	DE 2936518	A1	19810326	DE 1979-2936518	19790910
PRAI	DE 1979-2936518	A	19790910		
	US 1980-185165	A2	19800908		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4378446	IC	C08L061-28; C08L061-32
	INCL	524512000
	IPCI	C08L0061-28 [ICM]; C08L0061-32 [ICS]; C08L0061-00 [ICS,C*]
	IPCR	C08L0061-00 [I,C*]; C08L0061-00 [I,A]; B32B0027-42 [I,C*]; B32B0027-42 [I,A]; C08L0033-00 [I,C*]; C08L0033-00 [I,A]; C08L0033-02 [I,A]; C08L0061-20 [I,A]; D06N0007-00 [I,C*]; D06N0007-06 [I,A]; D21H0017-00 [I,C*]; D21H0017-37 [I,A]; D21H0017-43

[I,A]; D21H0017-51 [I,A]

NCL 524/512.000; 427/408.000; 427/415.000; 428/511.000; 428/514.000; 428/530.000; 524/247.000

DE 2936518 ECLA D21H017/37; D21H017/43; D21H017/51

IPCI C08L0061-28 [ICM]; C08L0061-00 [ICM,C*]; C08L0033-02 [ICS]; C08L0033-18 [ICS]; C08L0033-00 [ICS,C*]; C09D0003-52 [ICS]; D06N0003-12 [ICS]; D06N0003-08 [ICS]; D06N0003-00 [ICS,C*]; D06N0007-06 [ICS]; D06N0007-00 [ICS,C*]

IPCR C08L0061-00 [I,C*]; C08L0061-00 [I,A]; B32B0027-42 [I,C*]; B32B0027-42 [I,A]; C08L0033-00 [I,C*]; C08L0033-00 [I,A]; C08L0033-02 [I,A]; C08L0061-20 [I,A]; D06N0007-00 [I,C*]; D06N0007-06 [I,A]; D21H0017-00 [I,C*]; D21H0017-37 [I,A]; D21H0017-43 [I,A]; D21H0017-51 [I,A]

ECLA D21H017/37; D21H017/43; D21H017/51

AB Low-viscosity aqueous impregnating resin solns. for use in decorative laminates are prepared from 80-98% melamine resin precondensate and 2-20% water-soluble acrylic copolymer. Thus, 25 mL water, 39% aqueous HCHO 440, dimethylaminoethanol 3, 40% aqueous Na aminosulfonate 15, MeOH 35, iso-PrOH 25, and melamine 345 g were heated over 40 min to 90° and stirred 2 h at 90°. Then 54 g cocondensate of HCHO, formamide, and *s*-caprolactam was added to give a resin (I) [42231-28-7] solution Iso-PrOH 550, water 250, CCl₄ 8, hydroxyethyl methacrylate 182, acrylamide 35, and acrylic acid 20 g were polymerized with 3.0 g ammonium persulfate to give a resin (II) [72923-48-9]. Then 1000 g I solution and 70 g II solution were mixed and N,N-dimethylethanolamine formate 2.8, phosphoric acid ester curing agent 0.56, oxyethylated nonylphenol 1.7, and water 115 g were stirred into the resin mixture Paper was impregnated with the resin mixture and dried at 130-160°. The impregnated paper was pressed onto conventional core layers and molded 12 min at 140° at 100 bars to give a decorative laminate with high gloss.

ST melamine acrylic paper laminate

IT Paper

(laminates, decorative, acrylic-melamine resin compns. for)

IT 42231-28-7

RL: USES (Uses)

(impregnating resins, containing water-soluble acrylic polymers, for decorative laminates)

IT 60451-31-2 72923-48-9 77866-27-4 86435-87-2 86495-95-6

RL: USES (Uses)

(melamine resins containing, for decorative laminates)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Anon; US 3245932 A CAPLUS

(2) Anon; US 3976614 A CAPLUS

(3) Anon; US 3983307 A CAPLUS

(4) Anon; US 4038229 A CAPLUS

(5) Anon; US 4076896 A CAPLUS

L9 ANSWER 35 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1982:616701 CAPLUS

DN 97:216701

OREF 97:36393a,36396a

ED Entered STN: 12 May 1984

TI Polymer-supported biopolymer synthesis. 2. Phenolic poly(acryloylmorpholine)-based preparation of protected arginyl acylpeptide segments and derived arginyl peptides

AU Buckle, M.; Epton, R.; Marr, G.; Small, P. W.; Hudson, D.

CS Dep. Phys. Sci., Wolverhampton Polytech., Wolverhampton, WV1 1LY, UK

SO International Journal of Biological Macromolecules (1982), 4(5), 275-80

CODEN: IJBMDR; ISSN: 0141-8130

DT Journal
 LA English
 CC 34-3 (Amino Acids, Peptides, and Proteins)
 AB A new poly(acryloylmorpholine)-based phenolic support matrix, Koch-Light Peptide Resin A, was used for the solid (gel) phase assembly of polymer-bound protected arginyl acyl peptide segments. Two methods, selective hydrazinolysis and autocatalyzed transesterification with 2-dimethylaminoethanol, were used to detach the peptide segments from the resin. Selective hydrazinolysis illustrates the use of the phenolic support matrix in the preparation of arginyl acyl peptide hydrazides bearing hydrazine-labile nitro and benzyloxycarbonyl side chain protecting groups. Autocatalyzed hydrolysis in CF₃CH₂OH/CF₃CH₂ONa buffer was used to convert the protected arginyl acyl peptide 2-(dimethylamino)ethyl esters to the corresponding protected arginyl acyl peptide acids. Total deprotection of the latter was effected by catalytic transfer hydrogenation in formic acid.

ST arginyl peptide Merrifield synthesis; phenolic acryloylmorpholine polymer Merrifield support

IT Merrifield synthesis
 (of arginine-containing peptides, poly(acryloylmorpholine)-based phenolic support for)

IT Peptides, preparation
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (arginine-containing, preparation of, by solid-phase method, poly(acryloylmorpholine)-based phenolic support for)

IT 83713-07-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (as support for solid-phase synthesis of arginine peptides)

IT 4530-20-5DP, poly(acryloylmorpholine)-based phenolic resin-bound 83690-45-3P 83690-49-7DP, poly(acryloylmorpholine)-based phenolic resin-bound
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and deprotection of)

IT 83690-56-6P 83690-57-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and hydrolysis of)

IT 83690-50-0DP, poly(acryloylmorpholine)-based phenolic resin-bound 83690-52-2DP, poly(acryloylmorpholine)-based phenolic resin-bound 83694-96-6DP, poly(acryloylmorpholine)-based phenolic resin-bound
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and peptide coupling of, arginine derivative)

IT 56-40-6DP, poly(acryloylmorpholine)-based phenolic resin-bound
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and peptide coupling of, with arginine derivative)

IT 83690-46-4DP, poly(acryloylmorpholine)-based phenolic resin-bound 83690-47-5DP, poly(acryloylmorpholine)-based phenolic resin-bound
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and peptide coupling of, with glycine derivative)

IT 83690-51-1DP, poly(acryloylmorpholine)-based phenolic resin-bound
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and peptide coupling of, with isoleucine)

IT 61-90-5DP, poly(acryloylmorpholine)-based phenolic resin-bound
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and peptide coupling of, with lysine derivative)

IT 2418-80-6DP, poly(acryloylmorpholine)-based phenolic resin-bound

79821-64-0DP, poly(acryoylmorpholine)-based phenolic resin-bound
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and peptide coupling of, with proline derivative)
 IT 83690-45-3DP, poly(acryoylmorpholine)-based phenolic resin-bound
 83690-49-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and resin cleavage of)
 IT 13139-15-6DP, poly(acryoylmorpholine)-based phenolic resin-bound
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and solid-phase peptide synthesis with)
 IT 81657-13-8P 83690-55-5P 83690-59-9P 83690-61-3P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 IT 74-79-3DP, peptides containing
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, by solid-phase method, poly(acryoylmorpholine)-based
 phenolic support for)
 IT 4530-20-5 13139-15-6
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with phenolic resin)
 IT 67084-40-6 68641-29-2 83690-48-6 83690-53-3 83690-54-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (solid-phase peptide coupling of)

L9 ANSWER 36 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1982:8219 CAPLUS

DN 96:8219

OREF 96:1481a,1484a

ED Entered STN: 12 May 1984

TI Resin compositions for electrophoretic coating materials

PA Sumitomo Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09D005-25

ICS C09D003-72

CC 42-7 (Coatings, Inks, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 56106973	A	19810825	JP 1980-9202	19800128
	JP 61057352	B	19861206		
PRAI	JP 1980-9202	A	19800128		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 56106973	ICM	C09D005-25
	ICS	C09D003-72
	IPCI	C09D005-25; C09D0003-72

AB Coating materials for cathode electrodeposition are prepared from the reaction products of a modified polybutadiene with phenol, epoxy resins, and partially blocked organic polyisocyanates. Thus, maleated liquid polybutadiene 100, phenol 50, toluene 30.1, and BF3. phenol 0.36 g were heated 140 min at 80-90° to phenol conversion 20.5%, treated with Et3N to deactivate the catalyst, diluted with 33.9 g ethylene glycol mono-Et acetate (I), mixed (92.4 g) with bisphenol A-epichlorohydrin copolymer (II) 130, Et2NH 6.4, and I 58.2 g, heated 3 h at 120°, mixed with 21.9 g acrylic acid and 1 g hydroquinone, heated 5 h at 100°, mixed with 113.9 g solution of N,N-dimethylaminoethanol-half-blocked TDI in I, stirred 2 h at 70°, mixed with 10 g Et Cellosolve, heated 1 h

at 70°, mixed (380 parts) with 167 parts master batch containing the reaction product of II acrylate with the half-blocked TDI 12 parts, 85% formic acid, and H₂O, and used to form a coating on steel (carbon anode) having good appearance, pencil hardness 2H, Erichsen test >8 mm, du Pont impact resistance (0.5 in., 0.5 kg) >50, and good resistance to iso-BuCOMe, water, and corrosion.

ST cathode electrodeposition coating material; maleated polybutadiene coating material; epoxy acrylate coating material; ethylaminoethanol blocked TDI coating

IT Coating materials

(electrophoretic, containing acrylic acid-bisphenol A-epichlorohydrin copolymer-diethylaminoethanol-half-blocked TDI-maleated polybutadiene-phenol reaction products)

IT 79-10-7D, reaction products with bisphenol A-epichlorohydrin copolymer, diethylaminoethanol-half-blocked TDI, maleated polybutadiene, and phenol 108-95-2D, reaction products with acrylic acid, bisphenol A-epichlorohydrin copolymer, diethylaminoethanol-half-blocked TDI, and maleated polybutadiene 9003-17-2D, maleated, reaction products with acrylic acid, bisphenol A-epichlorohydrin copolymer, diethylaminoethanol-half-blocked TDI, and phenol 25068-38-6D, reaction products with acrylic acid, diethylaminoethanol-half-blocked TDI, maleated polybutadiene, and phenol 67391-91-7D, reaction products with acrylic acid, bisphenol A-epichlorohydrin copolymer, maleated polybutadiene, and phenol

RL: TEM (Technical or engineered material use); USES (Uses) (coatings, electrophoretic)

L9 ANSWER 37 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1981:534178 CAPLUS

DN 95:134178

OREF 95:22471a,22474a

ED Entered STN: 12 May 1984

TI Modified isocyanate compositions

IN Hughes, Jeffrey; Murray, Gerard John

PA Imperial Chemical Industries Ltd. , UK

SO Eur. Pat. Appl., 21 pp.

CODEN: EPXXDW

DT Patent

LA English

IC C08G018-77; C07C123-00

CC 38-2 (Elastomers, Including Natural Rubber)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 32011	A1	19810715	EP 1980-304506	19801212
	EP 32011	B1	19840822		
	R: BE, DE, FR, GB, IT, NL				
	GB 2068368	A	19810812	GB 1980-39820	19801212
	GB 2068368	B	19840404		
	JP 56100753	A	19810812	JP 1980-184177	19801226
	US 4322364	A	19820330	US 1981-222143	19810102
PRAT	GB 1980-12	A	19800102		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 32011	IC	C08G018-77; C07C123-00
	IPCI	C08G0018-77 [ICM]; C08G0018-00 [ICM,C*]; C07C0123-00 [ICS]
	IPCR	C07D0229-00 [I,C*]; C07D0229-00 [I,A]; C07C0067-00 [I,C*]; C07C0067-00 [I,A]; C07C0241-00 [I,C*]; C07C0241-00 [I,A]; C07C0267-00 [I,C*]; C07C0267-00 [I,A]; C08G0018-00 [I,C*]; C08G0018-78 [I,A];

		C08G0018-79 [I,A]
	ECLA	C08G018/78; C08G018/79G
GB 2068368	IPCI	C07C0123-00 [ICM]; C08G0018-78 [ICS]; C08G0018-00 [ICS,C*]
	IPCR	C07D0229-00 [I,C*]; C07D0229-00 [I,A]; C07C0067-00 [I,C*]; C07C0067-00 [I,A]; C07C0241-00 [I,C*]; C07C0241-00 [I,A]; C07C0267-00 [I,C*]; C07C0267-00 [I,A]; C08G0018-00 [I,C*]; C08G0018-78 [I,A]; C08G0018-79 [I,A]
JP 56100753	IPCI	C07C0119-055 [ICM]; C07D0229-00 [ICS]; C08G0018-78 [ICA]; C08G0018-00 [ICA,C*]
	IPCR	C07D0229-00 [I,C*]; C07D0229-00 [I,A]; C07C0067-00 [I,C*]; C07C0067-00 [I,A]; C07C0241-00 [I,C*]; C07C0241-00 [I,A]; C07C0267-00 [I,C*]; C07C0267-00 [I,A]; C08G0018-00 [I,C*]; C08G0018-78 [I,A]; C08G0018-79 [I,A]
US 4322364	IPCI	C07C0119-048 [ICM]; C07C0119-055 [ICS]
	IPCR	C07C0265-00 [I,C*]; C07C0265-12 [I,A]; C08G0018-00 [I,C*]; C08G0018-78 [I,A]
	NCL	560/351.000; 521/162.000; 528/044.000; 548/951.000; 560/035.000; 560/168.000
	ECLA	C07C118/00A4; C08G018/78

AB Modified isocyanates are manufactured by treating compns. containing carbodiimide

groups and free NCO groups with a diester of an aliphatic dicarboxylic acid in the presence of oxalic acid [110-40-7] or HCHO [64-18-6]. Liquid diphenylmethane diisocyanate compns. prepared by the process are storage stable and do not form a sediment on standing. The increase of NCO functionality and viscosity associated with the formation of uretonimine groups is minimized. Thus, 250 parts 4,4'-diphenylmethane diisocyanate was heated to 50° under N, 0.1 part dimethylaminoethanol was added, and the mixture was heated to 105° in 15 min. After adding 0.00125 part 1-phenyl-3-Me phospholene, the mixture was stirred at 105° until the NCO value was 30° and then treated with 16 parts 5:1 di-Et oxalate-oxalic acid mixture and 0.0375 part SOCl₂ to give a pale yellow liquid having viscosity 70 cp at 25° and final NCO value 26.5%. The product remained liquid even on prolonged storage at 0° and IR anal. showed there was no absorption at 1360 cm⁻¹ (indicating the absence of uretonimine groups.). A microcellular elastomer prepared from the modified isocyanate and polyethylene-polypropylene glycol, polyethylene-polypropylene glycol ether with glycerol, 1,4-butanediol, and ethylene glycol had d. 540 kg/m², Shore A hardness 71, tensile strength 3220 kN/m², and elongation at break 230%.

ST	urethane rubber foam; cellular polyurethane modified diisocyanate; diphenylmethane diisocyanate carbodiimide modified; oxalate diisocyanate modification; formic acid diisocyanate modification
IT	Rubber, urethane, preparation Urethane polymers, preparation RL: PREP (Preparation) (cellular, aliphatic dicarboxylic acid diester-modified diphenylmethane diisocyanates for manufacture of, storage-stable)
IT	64-18-6, uses and miscellaneous 110-40-7D, reaction products with diphenylmethane diisocyanate, polymers with glycols, polyoxyalkylenes and polyoxyalkylene ethers RL: USES (Uses) (diisocyanate modification with aliphatic dicarboxylic acid diesters in presence of)
IT	95-92-1D, reaction products with diphenylmethane diisocyanate, polymers with glycols, polyoxyalkylenes and polyoxyalkylene ethers 101-68-8D, reaction products with aliphatic dicarboxylic acid diesters, polymers with glycols, polyoxyalkylenes and polyoxyalkylene ethers 105-53-3D, reaction products with diphenylmethane diisocyanate, polymers with glycols,

polyoxyalkylenes and polyoxyalkylene ethers 106-65-0D, reaction products with diphenylmethane diisocyanate, polymers with glycols, polyoxyalkylenes and polyoxyalkylene ethers 107-21-1D, polymers with aliphatic dicarboxylic acid diester-modified diphenylmethane diisocyanates 110-63-4D, polymers with aliphatic dicarboxylic acid diester-modified diphenylmethane diisocyanates 2536-05-2D, reaction products with aliphatic dicarboxylic acid diesters, polymers with glycols, polyoxyalkylenes and polyoxyalkylene ethers 3155-16-6D, reaction products with diphenylmethane diisocyanate, polymers with glycols, polyoxyalkylenes and polyoxyalkylene ethers 5873-54-1D, reaction products with aliphatic dicarboxylic acid diesters, polymers with glycols, polyoxyalkylenes and polyoxyalkylene ethers 9003-11-6D, polymers with aliphatic dicarboxylic acid diester-modified diphenylmethane diisocyanates 9082-00-2D, polymers with aliphatic dicarboxylic acid diester-modified diphenylmethane diisocyanates 15779-81-4D, reaction products with diphenylmethane diisocyanate, polymers with glycols, polyoxyalkylenes and polyoxyalkylene ethers 67385-13-1D, reaction products with diphenylmethane diisocyanate, polymers with glycols, polyoxyalkylenes and polyoxyalkylene ethers
 RL: USES (Uses)
 (rubber)

L9 ANSWER 38 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1981:210587 CAPLUS

DN 94:210587

OREF 94:34452h,34453a

ED Entered STN: 12 May 1984

TI Storage-stable acrylate-modified melamine resin and its use

IN Adam, Wilhelm; Wagner, Curt A.; Konrad, Renate; Engelhardt, Friedrich; Riegel, Ulrich; Eckardt, Georg Wolfgang; Piesch, Steffen

PA Cassella A.-G., Fed. Rep. Ger.

SO Ger. Offen., 29 pp.

CODEN: GWXXBX

DT Patent

LA German

IC C08L061-28; C08L033-02; C08L033-18; C09D003-52

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2936518	A1	19810326	DE 1979-2936518	19790910
	EP 26841	A1	19810415	EP 1980-105172	19800830
	EP 26841	B1	19840516		
	R: AT, CH, DE, FR, GB, IT, NL, SE				
	AT 7507	T	19840615	AT 1980-105172	19800830
PRAI	JP 56045943	A	19810425	JP 1980-124141	19800909
	US 4378446	A	19830329	US 1981-266486	19810522
	DE 1979-2936518	A	19790910		
	EP 1980-105172	A	19800830		
	US 1980-185165	A2	19800908		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2936518	IC	C08L061-28; C08L033-02; C08L033-18; C09D003-52
	IPCI	C08L0061-28 [ICM]; C08L0061-00 [ICM,C*]; C08L0033-02 [ICS]; C08L0033-18 [ICS]; C08L0033-00 [ICS,C*]; C09D0003-52 [ICS]; D06N0003-12 [ICS]; D06N0003-08 [ICS]; D06N0003-00 [ICS,C*]; D06N0007-06 [ICS]; D06N0007-00 [ICS,C*]
	IPCR	C08L0061-00 [I,C*]; C08L0061-00 [I,A]; B32B0027-42 [I,C*]; B32B0027-42 [I,A]; C08L0033-00 [I,C*]; C08L0033-00 [I,A]; C08L0033-02 [I,A]; C08L0061-20 [I,A]; D06N0007-00 [I,C*]; D06N0007-06 [I,A];

D21H0017-00 [I,C*]; D21H0017-37 [I,A]; D21H0017-43 [I,A]; D21H0017-51 [I,A]
 EP 26841 ECLA D21H017/37; D21H017/43; D21H017/51
 IPCI C08L0061-32 [ICM]; D21H0003-56 [ICA]; C08L0061-32 [ICI]; C08L0061-00 [ICI,C*]; C08L0033-04 [ICI]; C08L0033-00 [ICI,C*]
 IPCR C08L0061-00 [I,C*]; C08L0061-00 [I,A]; B32B0027-42 [I,C*]; B32B0027-42 [I,A]; C08L0033-00 [I,C*]; C08L0033-00 [I,A]; C08L0033-02 [I,A]; C08L0061-20 [I,A]; D06N0007-00 [I,C*]; D06N0007-06 [I,A]; D21H0017-00 [I,C*]; D21H0017-37 [I,A]; D21H0017-43 [I,A]; D21H0017-51 [I,A]
 AT 7507 ECLA D21H017/37; D21H017/43; D21H017/51
 IPCI C08L0061-32 [ICM]; C08L0061-00 [ICM,C*]
 IPCR C08L0061-00 [I,C*]; C08L0061-32 [I,A]
 JP 56045943 IPCI C08L0061-28 [ICM]; C08L0061-00 [ICM,C*]; B32B0027-42 [ICS]
 IPCR C08L0061-00 [I,C*]; C08L0061-00 [I,A]; B32B0027-42 [I,C*]; B32B0027-42 [I,A]; C08L0033-00 [I,C*]; C08L0033-00 [I,A]; C08L0033-02 [I,A]; C08L0061-20 [I,A]; D06N0007-00 [I,C*]; D06N0007-06 [I,A]; D21H0017-00 [I,C*]; D21H0017-37 [I,A]; D21H0017-43 [I,A]; D21H0017-51 [I,A]
 US 4378446 IPCI C08L0061-28 [ICM]; C08L0061-32 [ICS]; C08L0061-00 [ICS,C*]
 IPCR C08L0061-00 [I,C*]; C08L0061-00 [I,A]; B32B0027-42 [I,C*]; B32B0027-42 [I,A]; C08L0033-00 [I,C*]; C08L0033-00 [I,A]; C08L0033-02 [I,A]; C08L0061-20 [I,A]; D06N0007-00 [I,C*]; D06N0007-06 [I,A]; D21H0017-00 [I,C*]; D21H0017-37 [I,A]; D21H0017-43 [I,A]; D21H0017-51 [I,A]
 NCL 524/512.000; 427/408.000; 427/415.000; 428/511.000; 428/514.000; 428/530.000; 524/247.000
 ECLA D21H017/37; D21H017/43; D21H017/51
 AB Storage-stable, low-viscosity aqueous impregnating resin solns. for the manufacture of laminates and wood products with improved weather resistance contain melamine resins and water-soluble acrylate polymers. Thus, 440 g 39% HCHO, 25 mL water, 3 g dimethylaminoethanol (I) [108-01-0], 15 g 40% Na amidosulfonic acid, 35 MeOH, 25 g iso-PrOH, and 345 g melamine were heated 2 h at 90° to give a clear resin [25036-13-9] solution, having water dilution capacity 1:20, which was mixed with 54 g water and 54 g 1:9:5 ε-caprolactam-formamide-formaldehyde copolymer [71092-18-7] to give resin solution A. A solution of 3.0 g (NH4)2S2O8 in 50 g water was added in 5-mL portions to a clear monomer solution containing iso-PrOH 550, water 250, CCl4 8, hydroxyethyl methacrylate 182, acrylamide 35, and acrylic acid 20 g and the composition was polymerized under N, mixed with 20 g I, and distilled to give a viscous polymer solution which was diluted with 200 mL water and 10 g I to produce solution B having pH 6.5-7 and solids content 40%. A mixture containing 1000 g A and 70 g B was combined with N,N-dimethylethanolamine formate 2.8, polyphosphoric acid ester hardener 0.56, polyethylene glycol alkylphenyl ether assistant 1.7, and water 115 g to give .apprx.1190 g impregnating solution (C) with solids content .apprx.50% and viscosity 15-20 s (DIN 53 211) at 20°. Paper (80 g/m2) impregnated with C and dried to give a resin content of 60% and moisture content of 5-6% was pressed for 12 min at 140° and 100 bar with a phenolic resin laminate. The decorative product lost 50% of its gloss after 3500 h exposure to UV light.
 ST melamine resin impregnation paper; acrylate polymer impregnation paper;

paper protective layer laminate; wood laminate protective layer; phenolic resin laminate; laminate weather resistant

IT Wood
(decorative laminates from, resin-impregnated paper as protective layers for weather-resistant melamine resin-acrylate polymer impregnating compns. for)

IT Paper
(impregnation of, melamine resin-acrylate polymer compns. for, in weather-resistant decorative laminate and wood product manufacture)

IT Phenolic resins, uses and miscellaneous
RL: USES (Uses)
(laminates, resin-impregnated paper as protective layers for weather-resistant, melamine resin-acrylate polymer impregnating compns. for)

IT 71092-18-7
RL: USES (Uses)
(impregnating solns. containing, for paper in weather-resistant decorative laminate and wood product manufacture)

IT 25036-13-9 77817-95-9
RL: USES (Uses)
(impregnating solns., containing acrylate copolymers, for paper in weather-resistant decorative laminate and wood product manufacture)

IT 72923-48-9 77866-27-4
RL: USES (Uses)
(impregnating solns., containing melamine resins, for paper in weather-resistant decorative laminate and wood product manufacture)

IT 108-01-0
RL: USES (Uses)
(in manufacture of storage-stable acrylate-modified melamine resins)

L9 ANSWER 39 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1980:604705 CAPLUS

DN 93:204705

OREF 93:32669a,32672a

ED Entered STN: 12 May 1984

TI 4,1-Benzoxazepine or 4,1-benzothiazepine derivatives

IN Hirai, Kentaro; Matsutani, Shigeru; Ishiba, Teruyuki; Makino, Itsuo

PA Shionogi and Co., Ltd., Japan

SO Ger. Offen., 57 pp.

CODEN: GWXXBX

DT Patent

LA German

IC C07D498-04; C07D513-04; C07D267-14; A61K031-55

CC 28-24 (Heterocyclic Compounds (More Than One Hetero Atom))

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2947773	A1	19800604	DE 1979-2947773	19791127
	JP 55072177	A	19800530	JP 1978-146949	19781127
	JP 62031719	B	19870709		
	CA 1127639	A1	19820713	CA 1979-339060	19791102
	US 4297280	A	19811027	US 1979-91814	19791106
	ZA 7906040	A	19801029	ZA 1979-6040	19791109
	AU 7952993	A	19800529	AU 1979-52993	19791120
	AU 533517	B2	19831201		
	CH 642647	A5	19840430	CH 1979-10423	19791122
	DK 7905001	A	19800528	DK 1979-5001	19791123
	SE 7909751	A	19800528	SE 1979-9751	19791126
	FR 2442239	A1	19800620	FR 1979-29096	19791126
	FR 2442239	B1	19830701		
	HU 21864	A2	19820227	HU 1979-SII731	19791126
	HU 179589	B	19821129		

BE 880282	A1	19800317	BE 1979-198307	19791127
NL 7908596	A	19800529	NL 1979-8596	19791127
GB 2046729	A	19801119	GB 1979-40898	19791127
GB 2046729	B	19830126		
DD 147360	A5	19810401	DD 1979-217162	19791127
SU 936815	A3	19820615	SU 1979-2847003	19791127
SU 1005660	A3	19830315	SU 1980-3211176	19801204
US 4341704	A	19820727	US 1981-276632	19810623
PRAI JP 1978-146949	A	19781127		
US 1979-91814	A3	19791106		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2947773	IC	C07D498-04; C07D513-04; C07D267-14; A61K031-55
	IPCI	C07D0498-04 [ICM]; C07D0498-00 [ICM,C*]; C07D0513-04 [ICS]; C07D0513-00 [ICS,C*]; C07D0267-14 [ICS]; C07D0267-00 [ICS,C*]; A61K0031-55 [ICS]
	IPCR	A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-4196 [I,C*]; A61K0031-4196 [I,A]; A61K0031-55 [I,C*]; A61K0031-55 [I,A]; A61K0031-553 [I,C*]; A61K0031-553 [I,A]; A61K0031-554 [I,C*]; A61K0031-554 [I,A]; A61P0021-00 [I,C*]; A61P0021-02 [I,A]; A61P0025-00 [I,C*]; A61P0025-00 [I,A]; A61P0025-02 [I,A]; A61P0025-08 [I,A]; A61P0025-20 [I,A]; A61P0025-22 [I,A]; C07D0249-00 [I,C*]; C07D0249-08 [I,A]; C07D0249-10 [I,A]; C07D0267-00 [I,C*]; C07D0267-14 [I,A]; C07D0273-00 [I,C*]; C07D0273-00 [I,A]; C07D0281-00 [I,C*]; C07D0281-10 [I,A]; C07D0285-00 [I,C*]; C07D0285-36 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04 [I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A]
	ECLA	C07D249/08C2D; C07D249/10; C07D267/14; C07D273/00J; C07D285/36; C07D498/04+267C+235C; C07D498/04+267C+249C; C07D498/04+267C+253C; C07D513/04+281C+249C; C07D513/04+281C+253C; C07D521/00B2E
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	IPCR	A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-4196 [I,C*]; A61K0031-4196 [I,A]; A61K0031-55 [I,C*]; A61K0031-55 [I,A]; A61K0031-553 [I,C*]; A61K0031-553 [I,A]; A61K0031-554 [I,C*]; A61K0031-554 [I,A]; A61P0021-00 [I,C*]; A61P0021-02 [I,A]; A61P0025-00 [I,C*]; A61P0025-00 [I,A]; A61P0025-02 [I,A]; A61P0025-08 [I,A]; A61P0025-20 [I,A]; A61P0025-22 [I,A]; C07D0249-00 [I,C*]; C07D0249-08 [I,A]; C07D0249-10 [I,A]; C07D0267-00 [I,C*]; C07D0267-14 [I,A]; C07D0273-00 [I,C*]; C07D0273-00 [I,A]; C07D0281-00 [I,C*]; C07D0281-10 [I,A]; C07D0285-00 [I,C*]; C07D0285-36 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04 [I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A]
CA 1127639	IPCI	C07D0267-14 [ICM]; C07D0267-00 [ICM,C*]; C07D0498-04 [ICS]; C07D0498-00 [ICS,C*]
	IPCR	A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-4196 [I,C*]; A61K0031-4196 [I,A]; A61K0031-55 [I,C*]; A61K0031-55 [I,A]; A61K0031-553 [I,C*]; A61K0031-553 [I,A]; A61K0031-554 [I,C*]; A61K0031-554 [I,A]; A61P0021-00 [I,C*]; A61P0021-02 [I,A]; A61P0025-00 [I,C*]; A61P0025-00 [I,A]; A61P0025-02 [I,A]; A61P0025-08 [I,A]; A61P0025-20 [I,A]; A61P0025-22 [I,A]; C07D0249-00 [I,C*]; C07D0249-08 [I,A];

		C07D0249-10 [I,A]; C07D0267-00 [I,C*]; C07D0267-14 [I,A]; C07D0273-00 [I,C*]; C07D0273-00 [I,A]; C07D0281-00 [I,C*]; C07D0281-10 [I,A]; C07D0285-00 [I,C*]; C07D0285-36 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04 [I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A]
US 4297280	IPCI	C07D0498-04 [ICM]; C07D0498-00 [ICM,C*]
	IPCR	A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-4196 [I,C*]; A61K0031-4196 [I,A]; A61K0031-55 [I,C*]; A61K0031-55 [I,A]; A61K0031-553 [I,C*]; A61K0031-553 [I,A]; A61K0031-554 [I,C*]; A61K0031-554 [I,A]; A61P0021-00 [I,C*]; A61P0021-02 [I,A]; A61P0025-00 [I,C*]; A61P0025-00 [I,A]; A61P0025-02 [I,A]; A61P0025-08 [I,A]; A61P0025-20 [I,A]; A61P0025-22 [I,A]; C07D0249-00 [I,C*]; C07D0249-08 [I,A]; C07D0249-10 [I,A]; C07D0267-00 [I,C*]; C07D0267-14 [I,A]; C07D0273-00 [I,C*]; C07D0273-00 [I,A]; C07D0281-00 [I,C*]; C07D0281-10 [I,A]; C07D0285-00 [I,C*]; C07D0285-36 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04 [I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A]
	NCL	540/548.000; 540/490.000; 540/552.000
	ECLA	C07D249/08C2D; C07D249/10; C07D267/14; C07D273/00J; C07D285/36; C07D498/04+267C+235C; C07D498/04+267C+249C; C07D498/04+267C+253C; C07D513/04+281C+249C; C07D513/04+281C+253C; C07D521/00B2E
ZA 7906040	IPCI	C07D [ICM]; A61K [ICS]
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	IPCR	A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-4196 [I,C*]; A61K0031-4196 [I,A]; A61K0031-55 [I,C*]; A61K0031-55 [I,A]; A61K0031-553 [I,C*]; A61K0031-553 [I,A]; A61K0031-554 [I,C*]; A61K0031-554 [I,A]; A61P0021-00 [I,C*]; A61P0021-02 [I,A]; A61P0025-00 [I,C*]; A61P0025-00 [I,A]; A61P0025-02 [I,A]; A61P0025-08 [I,A]; A61P0025-20 [I,A]; A61P0025-22 [I,A]; C07D0249-00 [I,C*]; C07D0249-08 [I,A]; C07D0249-10 [I,A]; C07D0267-00 [I,C*]; C07D0267-14 [I,A]; C07D0273-00 [I,C*]; C07D0273-00 [I,A]; C07D0281-00 [I,C*]; C07D0281-10 [I,A]; C07D0285-00 [I,C*]; C07D0285-36 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04

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CH 642647	IPCI	C07D0267-14 [ICM]; C07D0267-00 [ICM,C*]; C07D0281-10 [ICS]; C07D0281-00 [ICS,C*]; C07D0498-04 [ICS]; C07D0498-00 [ICS,C*]; C07D0513-04 [ICS]; C07D0513-00 [ICS,C*]
	IPCR	A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-4196 [I,C*]; A61K0031-4196 [I,A]; A61K0031-55 [I,C*]; A61K0031-55 [I,A]; A61K0031-553 [I,C*]; A61K0031-553 [I,A]; A61K0031-554 [I,C*]; A61K0031-554 [I,A]; A61P0021-00 [I,C*]; A61P0021-02 [I,A]; A61P0025-00 [I,C*]; A61P0025-00 [I,A]; A61P0025-02 [I,A]; A61P0025-08 [I,A]; A61P0025-20 [I,A]; A61P0025-22 [I,A]; C07D0249-00 [I,C*]; C07D0249-08 [I,A]; C07D0249-10 [I,A]; C07D0267-00 [I,C*]; C07D0267-14 [I,A]; C07D0273-00 [I,C*]; C07D0273-00 [I,A]; C07D0281-00 [I,C*]; C07D0281-10 [I,A]; C07D0285-00 [I,C*]; C07D0285-36 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04 [I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A]
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DK 7905001	IPCI	C07D [ICM]
	IPCR	A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-4196 [I,C*]; A61K0031-4196 [I,A]; A61K0031-55 [I,C*]; A61K0031-55 [I,A]; A61K0031-553 [I,C*]; A61K0031-553 [I,A]; A61K0031-554 [I,C*]; A61K0031-554 [I,A]; A61P0021-00 [I,C*]; A61P0021-02 [I,A]; A61P0025-00 [I,C*]; A61P0025-00 [I,A]; A61P0025-02 [I,A]; A61P0025-08 [I,A]; A61P0025-20 [I,A]; A61P0025-22 [I,A]; C07D0249-00 [I,C*]; C07D0249-08 [I,A]; C07D0249-10 [I,A]; C07D0267-00 [I,C*]; C07D0267-14 [I,A]; C07D0273-00 [I,C*]; C07D0273-00 [I,A]; C07D0281-00 [I,C*]; C07D0281-10 [I,A]; C07D0285-00 [I,C*]; C07D0285-36 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04 [I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A]
	ECLA	C07D249/08C2D; C07D249/10; C07D267/14; C07D273/00J; C07D285/36; C07D498/04+267C+235C; C07D498/04+267C+249C; C07D498/04+267C+253C; C07D513/04+281C+249C; C07D513/04+281C+253C; C07D521/00B2E
SE 7909751	IPCI	C07D0489-04 [ICM]; C07D0489-00 [ICM,C*]; C07D0513-04 [ICS]; C07D0513-00 [ICS,C*]; C07D0267-14 [ICS]; C07D0267-00 [ICS,C*]
	IPCR	A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-4196 [I,C*]; A61K0031-4196 [I,A]; A61K0031-55 [I,C*]; A61K0031-55 [I,A]; A61K0031-553 [I,C*]; A61K0031-553 [I,A]; A61K0031-554 [I,C*]; A61K0031-554 [I,A]; A61P0021-00 [I,C*]; A61P0021-02 [I,A]; A61P0025-00 [I,C*]; A61P0025-00 [I,A]; A61P0025-02 [I,A]; A61P0025-08 [I,A]; A61P0025-20 [I,A]; A61P0025-22 [I,A]; C07D0249-00 [I,C*]; C07D0249-08 [I,A]; C07D0249-10 [I,A]; C07D0267-00 [I,C*]; C07D0267-14 [I,A]; C07D0273-00 [I,C*]; C07D0273-00 [I,A]; C07D0281-00 [I,C*]; C07D0281-10 [I,A]; C07D0285-00 [I,C*]; C07D0285-36 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04 [I,A]

		[I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A] ECLA C07D249/08C2D; C07D249/10; C07D267/14; C07D273/00J; C07D285/36; C07D498/04+267C+235C; C07D498/04+267C+249C; C07D498/04+267C+253C; C07D513/04+281C+249C; C07D513/04+281C+253C; C07D521/00B2E
FR 2442239	IPCI	C07D0498-04 [ICM]; C07D0498-00 [ICM,C*]; C07D0267-14 [ICS]; C07D0267-00 [ICS,C*]; C07D0513-04 [ICS]; C07D0513-00 [ICS,C*]; A61K0031-55 [ICS]
	IPCR	A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-4196 [I,C*]; A61K0031-4196 [I,A]; A61K0031-55 [I,C*]; A61K0031-55 [I,A]; A61K0031-553 [I,C*]; A61K0031-553 [I,A]; A61K0031-554 [I,C*]; A61K0031-554 [I,A]; A61P0021-00 [I,C*]; A61P0021-02 [I,A]; A61P0025-00 [I,C*]; A61P0025-00 [I,A]; A61P0025-02 [I,A]; A61P0025-08 [I,A]; A61P0025-20 [I,A]; A61P0025-22 [I,A]; C07D0249-00 [I,C*]; C07D0249-08 [I,A]; C07D0249-10 [I,A]; C07D0267-00 [I,C*]; C07D0267-14 [I,A]; C07D0273-00 [I,C*]; C07D0273-00 [I,A]; C07D0281-00 [I,C*]; C07D0281-10 [I,A]; C07D0285-00 [I,C*]; C07D0285-36 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04 [I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A]
HU 21864	IPCI	C07D0498-04 [ICM]; C07D0498-00 [ICM,C*]; C07D0513-04 [ICS]; C07D0513-00 [ICS,C*]; C07D0267-14 [ICS]; C07D0267-00 [ICS,C*]
	ECLA	C07D249/08C2D; C07D249/10; C07D267/14; C07D273/00J; C07D285/36; C07D498/04+267C+235C; C07D498/04+267C+249C; C07D498/04+267C+253C; C07D513/04+281C+249C; C07D513/04+281C+253C; C07D521/00B2E
BE 880282	IPCI	C07D [ICM]; A61K [ICS]
	IPCR	A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-4196 [I,C*]; A61K0031-4196 [I,A]; A61K0031-55 [I,C*]; A61K0031-55 [I,A]; A61K0031-553 [I,C*]; A61K0031-553 [I,A]; A61K0031-554 [I,C*]; A61K0031-554 [I,A]; A61P0021-00 [I,C*]; A61P0021-02 [I,A]; A61P0025-00 [I,C*]; A61P0025-00 [I,A]; A61P0025-02 [I,A]; A61P0025-08 [I,A]; A61P0025-20 [I,A]; A61P0025-22 [I,A]; C07D0249-00 [I,C*]; C07D0249-08 [I,A]; C07D0249-10 [I,A]; C07D0267-00 [I,C*]; C07D0267-14 [I,A]; C07D0273-00 [I,C*]; C07D0273-00 [I,A]; C07D0281-00 [I,C*]; C07D0281-10 [I,A]; C07D0285-00 [I,C*]; C07D0285-36 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04 [I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A]
NL 7908596	IPCI	C07D0267-14 [ICM]; C07D0267-00 [ICM,C*]; C07D0281-10 [ICS]; C07D0281-00 [ICS,C*]; C07D0498-04 [ICS]; C07D0498-00 [ICS,C*]; C07D0513-04 [ICS]; C07D0513-00 [ICS,C*]; A61K0031-55 [ICS]
	IPCR	A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-4196 [I,C*]; A61K0031-4196 [I,A]; A61K0031-55 [I,C*]; A61K0031-55 [I,A]; A61K0031-553 [I,C*]; A61K0031-553 [I,A]; A61K0031-554 [I,C*]; A61K0031-554 [I,A]; A61P0021-00 [I,C*]; A61P0021-02 [I,A]; A61P0025-00 [I,C*]; A61P0025-00 [I,A]; A61P0025-02 [I,A]; A61P0025-08 [I,A]; A61P0025-20 [I,A]; A61P0025-22 [I,A]; C07D0249-00 [I,C*]; C07D0249-08 [I,A]; C07D0249-10 [I,A]; C07D0267-00 [I,C*]; C07D0267-14 [I,A]; C07D0273-00 [I,C*]; C07D0273-00 [I,A]; C07D0281-00 [I,C*]; C07D0281-10 [I,A]; C07D0285-00 [I,C*]; C07D0285-36 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04 [I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A]

	ECLA	C07D249/08C2D; C07D249/10; C07D267/14; C07D273/00J; C07D285/36; C07D498/04+267C+235C; C07D498/04+267C+249C; C07D498/04+267C+253C; C07D513/04+281C+249C; C07D513/04+281C+253C; C07D521/00B2E
GB 2046729	IPCI	C07D0267-14 [ICM]; A61K0031-55 [ICS]; C07D0498-04 [ICS]; C07D0498-00 [ICS,C*]; C07D0513-04 [ICS]; C07D0513-00 [ICS,C*]; C07D0281-00 [ICS]; C07D0235-00 [ICS]; C07D0249-00 [ICS]; C07D0253-00 [ICS]; C07D0267-00 [ICS]
	IPCR	A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-4196 [I,C*]; A61K0031-4196 [I,A]; A61K0031-55 [I,C*]; A61K0031-55 [I,A]; A61K0031-553 [I,C*]; A61K0031-553 [I,A]; A61K0031-554 [I,C*]; A61K0031-554 [I,A]; A61P0021-00 [I,C*]; A61P0021-02 [I,A]; A61P0025-00 [I,C*]; A61P0025-00 [I,A]; A61P0025-02 [I,A]; A61P0025-08 [I,A]; A61P0025-20 [I,A]; A61P0025-22 [I,A]; C07D0249-00 [I,C*]; C07D0249-08 [I,A]; C07D0249-10 [I,A]; C07D0267-00 [I,C*]; C07D0267-14 [I,A]; C07D0273-00 [I,C*]; C07D0273-00 [I,A]; C07D0281-00 [I,C*]; C07D0281-10 [I,A]; C07D0285-00 [I,C*]; C07D0285-36 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04 [I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A]
DD 147360	IPCI	C07D0498-04 [ICM]; C07D0498-00 [ICM,C*]; C07D0513-04 [ICA]; C07D0513-00 [ICA,C*]; C07D0267-14 [ICA]; C07D0267-00 [ICA,C*]; C07D0281-10 [ICA]; C07D0281-00 [ICA,C*]
	IPCR	A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-4196 [I,C*]; A61K0031-4196 [I,A]; A61K0031-55 [I,C*]; A61K0031-55 [I,A]; A61K0031-553 [I,C*]; A61K0031-553 [I,A]; A61K0031-554 [I,C*]; A61K0031-554 [I,A]; A61P0021-00 [I,C*]; A61P0021-02 [I,A]; A61P0025-00 [I,C*]; A61P0025-00 [I,A]; A61P0025-02 [I,A]; A61P0025-08 [I,A]; A61P0025-20 [I,A]; A61P0025-22 [I,A]; C07D0249-00 [I,C*]; C07D0249-08 [I,A]; C07D0249-10 [I,A]; C07D0267-00 [I,C*]; C07D0267-14 [I,A]; C07D0273-00 [I,C*]; C07D0273-00 [I,A]; C07D0281-00 [I,C*]; C07D0281-10 [I,A]; C07D0285-00 [I,C*]; C07D0285-36 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04 [I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A]
	ECLA	C07D249/08C2D; C07D249/10; C07D267/14; C07D273/00J; C07D285/36; C07D498/04+267C+235C; C07D498/04+267C+249C; C07D498/04+267C+253C; C07D513/04+281C+249C; C07D513/04+281C+253C; C07D521/00B2E
SU 936815	IPCI	C07D0498-04 [ICM]; C07D0498-00 [ICM,C*]; C07D0513-04 [ICS]; C07D0513-00 [ICS,C*]; A61K0031-41 [ICS]; A61K0031-53 [ICS]; A61K0031-55 [ICS]
	IPCR	A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-4196 [I,C*]; A61K0031-4196 [I,A]; A61K0031-55 [I,C*]; A61K0031-55 [I,A]; A61K0031-553 [I,C*]; A61K0031-553 [I,A]; A61K0031-554 [I,C*]; A61K0031-554 [I,A]; A61P0021-00 [I,C*]; A61P0021-02 [I,A]; A61P0025-00 [I,C*]; A61P0025-00 [I,A]; A61P0025-02 [I,A]; A61P0025-08 [I,A]; A61P0025-20 [I,A]; A61P0025-22 [I,A]; C07D0249-00 [I,C*]; C07D0249-08 [I,A]; C07D0249-10 [I,A]; C07D0267-00 [I,C*]; C07D0267-14 [I,A]; C07D0273-00 [I,C*]; C07D0273-00 [I,A]; C07D0281-00 [I,C*]; C07D0281-10 [I,A]; C07D0285-00 [I,C*]; C07D0285-36 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04 [I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A]

SU 1005660 IPCI C07D0267-14 [ICM]; C07D0267-00 [ICM,C*]; C07D0281-10 [ICS]; C07D0281-00 [ICS,C*]; C07D0498-04 [ICS]; C07D0498-00 [ICS,C*]; C07D0513-04 [ICS]; C07D0513-00 [ICS,C*]; A61K0031-41 [ICS]; A61K0031-53 [ICS]; A61K0031-55 [ICS]

IPCR A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-4196 [I,C*]; A61K0031-4196 [I,A]; A61K0031-55 [I,C*]; A61K0031-55 [I,A]; A61K0031-553 [I,C*]; A61K0031-553 [I,A]; A61K0031-554 [I,C*]; A61K0031-554 [I,A]; A61P0021-00 [I,C*]; A61P0021-02 [I,A]; A61P0025-00 [I,C*]; A61P0025-00 [I,A]; A61P0025-02 [I,A]; A61P0025-08 [I,A]; A61P0025-20 [I,A]; A61P0025-22 [I,A]; C07D0249-00 [I,C*]; C07D0249-08 [I,A]; C07D0249-10 [I,A]; C07D0267-00 [I,C*]; C07D0267-14 [I,A]; C07D0273-00 [I,C*]; C07D0273-00 [I,A]; C07D0281-00 [I,C*]; C07D0281-10 [I,A]; C07D0285-00 [I,C*]; C07D0285-36 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04 [I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A]; C07D0513-04 [ICM]; C07D0513-00 [ICM,C*]

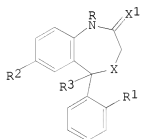
US 4341704 IPCI A61K0031-395 [I,C*]; A61K0031-395 [I,A]; A61K0031-4196 [I,C*]; A61K0031-4196 [I,A]; A61K0031-55 [I,C*]; A61K0031-55 [I,A]; A61K0031-553 [I,C*]; A61K0031-553 [I,A]; A61K0031-554 [I,C*]; A61K0031-554 [I,A]; A61P0021-00 [I,C*]; A61P0021-02 [I,A]; A61P0025-00 [I,C*]; A61P0025-00 [I,A]; A61P0025-02 [I,A]; A61P0025-08 [I,A]; A61P0025-20 [I,A]; A61P0025-22 [I,A]; C07D0249-00 [I,C*]; C07D0249-08 [I,A]; C07D0249-10 [I,A]; C07D0267-00 [I,C*]; C07D0267-14 [I,A]; C07D0273-00 [I,C*]; C07D0273-00 [I,A]; C07D0281-00 [I,C*]; C07D0281-10 [I,A]; C07D0285-00 [I,C*]; C07D0285-36 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04 [I,A]; C07D0521-00 [I,C*]; C07D0521-00 [I,A]

NCL 540/548.000; 540/490.000; 540/552.000

ECLA C07D249/08C2D; C07D249/10; C07D267/14; C07D273/00J; C07D285/36; C07D498/04+267C+235C; C07D498/04+267C+249C; C07D498/04+267C+253C; C07D513/04+281C+249C; C07D513/04+281C+253C; C07D521/00B2E

OS CASREACT 93:204705; MARPAT 93:204705

GI



AB The title compds. I [X = O, S; RX1 = CR4:NN:, N:CR5N:, COC(:CHR6)N:, COCR7:NN:; X1 = O, S; R = H, alkyl, aralkyl; R1 = H, halogen; R2 = halogen, NO2; R3 = H, alkoxy, dialkylaminoalkoxy; R4 = alkyl, aminoalkyl; R5 = dialkylaminoacyl; R6 = dialkylamino, 4-alkylpiperazino; R7 = alkyl]

were prepared Thus, 5,2-Cl(H2N)C6H3COC6H4Cl-2 was acylated with ClCH2COC1, 5,2-Cl(ClCH2CONH)C6H3COC6H4Cl-2 reduced to the alc., and cyclized with Me2CHONa to give I (X = X1 = O, R = R3 = H, R1 = R2 = Cl). The latter compound was converted to the thione and treated with AcNHNH2 to give I (X = O, X1 = NNHAc, R = R3 = H, R1 = R2 = Cl), which was cyclized with acid to I (X = O, RX1 = CMe:NN:, R1 = R2 = Cl, R3 = H; II). II had ED50 of 0.74 and 30.6 mg/kg resp. in the pentetrazole and rotating rod tests.

ST benzoxazepine; benzothiazepine; sedative benzothiazepine benzoxazepine; muscle relaxant benzoxazepine benzothiazepine; triazolobenzoxazepine; imidazobenzoxazepine; triazinobenzoxazepine

IT Hypnotics and Sedatives
Muscle relaxants and Spasmolytics
(benzoxazepine and benzothiazepine derivs.)

IT 2958-36-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation of)

IT 79-04-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation of aminobenzophenone derivative by)

IT 54196-62-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and chlorination of)

IT 75450-23-6P 75450-26-9P 75450-37-2P 75450-42-9P 75450-50-9P
75459-11-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and cyclization of)

IT 57998-42-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and cyclization of, with potassium ethoxide)

IT 62293-36-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and cyclization of, with potassium methoxide)

IT 75450-46-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and cyclization of, with sodium ethoxide)

IT 75450-31-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and deblocking of)

IT 54196-61-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and methylation of)

IT 75450-32-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and oxidation of)

IT 75450-40-7P 75450-43-0P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation and pharmacol. activity of)

IT 75450-38-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with DMF di-Me acetal)

IT 75450-25-8P 75450-35-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and reaction of, with acetylhydrazine)

IT 75450-28-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and reaction of, with azide)

IT 74067-45-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and reaction of, with carbon disulfide)

IT 75450-33-8P 75450-45-2P 75450-49-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and reaction of, with chloroacetyl chloride)

IT 75450-41-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and reaction of, with pyruvic acid)

IT 14405-03-9P 75450-29-2P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and reduction of)

IT 75450-62-3P 75459-13-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and sedative and muscle relaxant activity of)

IT 75450-24-7P 75450-34-9P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and thiolation of)

IT 75450-30-5P 75450-36-1P 75450-44-1P 75450-47-4P 75450-48-5P
 75450-51-0P 75450-52-1P 75450-53-2P 75450-54-3P 75450-55-4P
 75450-56-5P 75450-57-6P 75450-58-7P 75450-59-8P 75450-60-1P
 75450-61-2P 75459-12-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

IT 75450-27-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation, bromination, and pharmacol. activity of)

IT 75450-39-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation, reaction with methylpiperazine, and pharmacol. activity of)

IT 75-15-0, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with aminophenyl carbinol)

IT 64-18-6, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with aminoquinazoline)

IT 56-40-6, reactions 302-01-2, reactions 1068-57-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with benzoxazepinethione)

IT 5680-83-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with benzoxazepinethione derivative)

IT 127-17-3, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with benzoxazepinone hydrazone)

IT 54567-12-3 65698-99-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with chloroacetyl chloride)

IT 108-01-0

IT RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with chloroacetylaminobenzophenone derivative)
 63480-61-5
 IT RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with dimethylaminoethanol)
 109-01-3
 IT RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with dimethylaminomethyleneimidazobenzoxazepinone)
 54567-12-3
 IT RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with formic acid)
 4637-24-5
 IT RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with imidazobenzoxazepinone)

L9 ANSWER 40 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1976:525819 CAPLUS
 DN 85:125819
 OREF 85:20189a,20192a
 ED Entered STN: 12 May 1984
 TI Leather tanning using hydrophilic oligourethanes
 IN Traeubel, Harro; Reiff, Helmut; Dieterich, Dieter
 PA Bayer A.-G., Fed. Rep. Ger.
 SO Ger. Offen., 22 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 IC C14C003-18
 CC 41-3 (Leather and Related Materials)
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2504081	A1	19760805	DE 1975-2504081	19750131
	DE 2504081	B2	19800131		
	DE 2504081	C3	19800918		
	FR 2266743	A1	19751031	FR 1975-10657	19750327
	FR 2266743	B1	19781215		
	DD 117477	A5	19760112	DD 1975-185180	19750402
	GB 1495598	A	19771221	GB 1975-13397	19750402
	BR 7502008	A	19761221	BR 1975-2008	19750403
	US 4106897	A	19780815	US 1976-718489	19760830
PRAI	DE 1974-2416485	A	19740404		
	DE 1975-2504081	A	19750131		
	US 1975-561809	A2	19750325		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2504081	IC	C14C003-18
	IPCI	C14C0003-18 [ICM]; C14C0003-00 [ICM,C*]
	IPCR	C14C0018-00 [I,C*]; C08G0018-08 [I,A]; C14C0003-00 [I,C*]; C14C0003-18 [I,A]; D06P0001-44 [I,C*]; D06P0001-52 [I,A]; D06P0001-64 [I,C*]; D06P0001-649 [I,A]
FR 2266743	ECLA	C08G018/08B; C14C003/18; D06P001/52D6; D06P001/649D
DD 117477	IPCI	C14C0003-18 [ICM]; C14C0003-00 [ICM,C*]
	IPCI	C14C0003-18 [ICM]; C14C0003-00 [ICM,C*]
	IPCR	C14C0003-00 [I,C*]; C14C0003-18 [I,A]
	ECLA	C14C003/18
GB 1495598	IPCI	C14C0003-18 [ICM]; C14C0003-16 [ICS]; C14C0003-00 [ICS,C*]; C08G0018-06 [ICS]; C08G0018-00 [ICS,C*]
	IPCR	C14C0003-00 [I,C*]; C14C0003-18 [I,A]
BR 7502008	IPCI	C14C0003-18 [ICM]; C14C0003-00 [ICM,C*]

C14C0003-00 [I,C*]; C14C0003-18 [I,A]

US 4106897 IPCI C14C0003-18; C14C0003-00 [C*]
IPCR C14C0003-00 [I,C*]; C14C0003-18 [I,A]
NCL 008/094.330; 008/094.190R
ECLA C14C003/18

AB Hides or leather were tanned or retanned, resp., by treatment with an aqueous bath containing a methylolated hydrophilic oligourethane with mol. weight 300–20,000 and, optionally, HCHO or a HCHO-forming substance. Thus, 400 g nonaethylene glycol (1 mole) was dehydrated and mixed at 70° with 151 g 1,6-hexamethylene diisocyanate (0.9 mole), and the mixture was heated to 120° over 1 hr and stirred another 5 hr at this temperature After the addition of 5 ml dimethylaminoethanol [108-01-0], the ir spectrum showed no NCO band. Dropwise addition of 1285 ml H₂O gave a 30% solution of oligourethane [58043-06-4] with pH 7.5. This solution (100 g) was mixed with 3.3 g of a 30% aqueous HCHO solution A chrome-tanned cowhide leather was neutralized to pH 4.5 with 1% Ca formate solution and treated 3 hr at 20° with a 3% aqueous solution of the above mixture to pH 4.3, a somewhat fuller, clear, soft leather resulted.

ST oligourethane tanning hide leather

IT Urethane polymers, uses and miscellaneous
RL: USES (Uses)
(oligomeric, tanning with)

IT Tanning
(with oligourethanes)

IT Poly(oxy-1,2-ethanedioxy-1,2-ethanediolyoxy-1,2-ethanediolyoxy-1,2-ethanediolyoxy-1,2-ethanediolyoxy-1,2-ethanediolyoxy-1,2-ethanediolyoxycarbonylimino-1,6-hexanediyiminocarbyl), methanol blocked
RL: USES (Uses)
(oligomeric, tanning with)

IT 3,6,9,12,15,18,21-heptaaxatricosane-1,23-diol, polymer with 1,6-diisocyanatohexane, methanol-blocked
Hexane, 1,6-diisocyanato-, polymer with 3,6,9,12,15,18,21-heptaaxatricosane-1,23-diol, methanol-blocked
RL: USES (Uses)
(oligomeric, tanning with formaldehyde-containing)

IT 108-01-0D, Ethanol, 2-(dimethylamino)-, reaction products with polyurethanes 58043-08-6D, Poly(oxy-1,2-ethanedioxy-1,2-ethanedioxy-1,2-ethanedioxy-1,2-ethanedioxy-1,2-ethanedioxy-1,2-ethanedioxy-1,2-ethanedioxycarbonylimino-1,6-hexanediyiminocarbyl), reaction products with dimethylaminoethanol 58189-99-4D, Hexane, 1,6-diisocyanato-, polymer with 3,6,9,12,15,18,21-heptaaxatricosane-1,23-diol, reaction products with dimethylaminoethanol 58189-99-4D, 3,6,9,12,15,18,21-heptaaxatricosane-1,23-diol, polymer with 1,6-diisocyanatohexane, reaction products with dimethylaminoethanol
RL: USES (Uses)
(oligomeric, tanning with)

IT 58043-06-4D, Hexane, 1,6-diisocyanato-, polymer with 3,6,9,12,15,18,21-octaohahexasacane-1,26-diol, reaction products with dimethylaminoethanol 58043-06-4D, 3,6,9,12,15,18,21-Octaoxahehexacosane-1,26-diol, polymer with 1,6-diisocyanatohexane, reaction products with dimethylaminoethanol 58213-23-3
RL: USES (Uses)
(oligomeric, tanning with formaldehyde-containing)

L9 ANSWER 41 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1976:61229 CAPLUS
DN 84:61229
OREF 84:10089a,10092a

ED Entered STN: 12 May 1984
 TI Leather tanning with oligourethanes
 IN Traeubel, Harro; Reiff, Helmut
 PA Bayer A.-G., Fed. Rep. Ger.
 SO Ger. Offen., 13 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 IC C14C
 CC 41-3 (Leather and Related Materials)
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2416485	A1	19751016	DE 1974-2416485	19740404
	FR 2266743	A1	19751031	FR 1975-10657	19750327
	FR 2266743	B1	19781215		
	DD 117477	A5	19760112	DD 1975-185180	19750402
	GB 1495598	A	19771221	GB 1975-13397	19750402
	BR 7502008	A	19761221	BR 1975-2008	19750403
	US 4106897	A	19780815	US 1976-718489	19760830
PRAI	DE 1974-2416485	A	19740404		
	DE 1975-2504081	A	19750131		
	US 1975-561809	A2	19750325		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2416485	IC	C14C
	IPCI	C14C0003-18 [ICM]; C14C0003-16 [ICS]; C14C0003-00 [ICS,C*]
	IPCR	C14C0003-00 [I,C*]; C14C0003-18 [I,A]
	ECLA	C14C003/18
FR 2266743	IPCI	C14C0003-18 [ICM]; C14C0003-00 [ICM,C*]
DD 117477	IPCI	C14C0003-18 [ICM]; C14C0003-00 [ICM,C*]
	IPCR	C14C0003-00 [I,C*]; C14C0003-18 [I,A]
	ECLA	C14C003/18
GB 1495598	IPCI	C14C0003-18 [ICM]; C14C0003-16 [ICS]; C14C0003-00 [ICS,C*]; C08G0018-06 [ICS]; C08G0018-00 [ICS,C*]
	IPCR	C14C0003-00 [I,C*]; C14C0003-18 [I,A]
BR 7502008	IPCI	C14C0003-18 [ICM]; C14C0003-00 [ICM,C*]
	IPCR	C14C0003-00 [I,C*]; C14C0003-18 [I,A]
US 4106897	IPCI	C14C0003-18; C14C0003-00 [C*]
	IPCR	C14C0003-00 [I,C*]; C14C0003-18 [I,A]
	NCL	008/094.330; 008/094.190R
	ECLA	C14C003/18

AB Hides or leather were tanned or retanned, resp., with an aqueous liquor containing methylolated oligourethanes with terminal OH groups and a mol. weight of 500-20,000 and HCHO or a HCHO-forming substance. Thus, 400 g nonaethylene glycol was dried and mixed at 70° with 151 g 1,6-hexamethylenediisocyanate, the mixture was heated to 120° in 1 hr and stirred another 5 hr at that temperature, 5 ml. of dimethylaminoethanol was added followed dropwise by 1285 ml H2O to give a 30% oligourethane [58043-06-4] solution with pH 7.5. To 100 g of this solution was added 3.3 g of a 30% aqueous HCHO solution. A chrome tanned

cowhide leather was neutralized with a 1% Ca formate solution to pH 4.5 and then processed 3 hr at 20° with the above product diluted to a 3% solids content with 10-fold H2O at a pH of 4.3. The process produced a somewhat fuller, softer retanned leather.

ST polyurethane tanning hide leather
 IT Urethane polymers, uses and miscellaneous
 RL: USES (Uses)

(tanning with)
 IT Tanning materials
 (urethane polymers as)
 IT Tanning
 (with urethane polymers)
 IT 58043-06-4 58043-08-6 58090-46-3 58189-99-4 58213-23-3
 RL: USES (Uses)
 (tanning with)

L9 ANSWER 42 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1974:4262/2 CAPLUS

DN 81:262/2

OREF 81:4245a,4248a

ED Entered STN: 12 May 1984

TI Aminoorthesters as polyurethane catalysts

IN Bechara, Ibrahim S.; Holland, Dewey G.

SO U.S., 6 pp.

CODEN: USXXAM

DT Patent

LA English

IC C08G

INCL 260075000NC

CC 35-4 (Synthetic High Polymers)

FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3786029	A	19740115	US 1972-276976	19720801
US 3879465	A	19750422	US 1973-393722	19730904
JP 56010301	B	19810306	JP 1973-135424	19731205
PRAI US 1972-276976	A3	19720801		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3786029	IC	C08G
	INCL	260075000NC
	IPCI	C08G0022-38 [ICM]; C08G0022-46 [ICS]
	NCL	528/053.000; 521/129.000; 521/172.000; 521/178.000; 528/044.000; 528/051.000; 528/072.000; 528/076.000; 528/080.000; 564/346.000; 564/434.000; 564/504.000; 564/505.000
US 3879465	IPCI	C07C0093-02 [ICM]
	IPCR	C08G0018-00 [I,C*]; C08G0018-18 [I,A]; C08G0059-00 [I,C*]; C08G0059-50 [I,A]
	NCL	564/504.000; 521/129.000; 564/346.000
	ECLA	C08G018/18G; C08G059/50H
JP 56010301	IPCI	C07C0093-04 [ICM]; C08G0018-18 [ICA]; C08G0018-00 [ICA,C*]

AB Aminoorthesters with good stability, low odor and toxicity, useful as polyurethane catalysts and curing agents for epoxy resins, were prepared from aminoalkanols and orthoesters RC(OR1)3 (R = H, Ph, C1-4 alkyl, R1 = C2-4 alkyl). Thus, a mixture of Me orthoformate [149-73-5] 10.6, 2-(dimethylamino)ethanol (I) [108-01-0] 27 and p-MeC6H4SO3H 0.3 g was refluxed for several days and distilled, to obtain two fractions at 95-100.deg./3 mm and 135.deg./3 mm which were identified as methoxy bis(diethylaminoethyl)formate [51877-55-5] and tris(diethylaminoethyl)formate (II) [51936-97-1] resp. A urethane foam composition containing polyol 109, blowing agent 47, surfactant 1.5, di-Bu tin dilaurate 0.12, diisocyanate 105 and II 0.8 g showed gel time 35 sec, rise time 63 sec and tack free time 47 sec as compared with 118, 265 and 222 for a similar compn containing I.

ST aminoester polyurethane foam catalyst; ester amino polyurethane catalyst

IT Esters, uses and miscellaneous
 RL: PREP (Preparation)
 (aminoortho-, catalysts, for polyurethane foam preparation)

IT Polymerization catalysts
 (aminoorthoesters, for polyurethane foam manufacture)

IT Urethane polymers, preparation
 RL: PREP (Preparation)
 (cellular, aminoorthoester catalysts for)

IT 38565-71-8P 38565-72-9P 51936-97-1P 52379-12-1P 52379-13-2P
 52379-14-3P 52379-15-4P 52379-16-5P 52379-17-6P 52379-18-7P
 RL: PREP (Preparation)
 (preparation of)

IT 78-39-7 122-51-0 149-73-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with aminoalkanols)

IT 100-37-8 108-16-7 1704-62-7 5966-51-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with orthoesters)

L9 ANSWER 43 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1974:134171 CAPLUS
 DN 80:134171
 OREF 80:21641a,21644a
 ED Entered STN: 12 May 1984
 TI Storage-stable polyols for polyurethane foams
 IN Crawshaw, Robert A.; Loible, John E.; Moffatt, Vivian A.
 PA Shell Internationale Research Maatschappij N. V.
 SO Ger. Offen., 15 pp.
 CODEN: GWXXBX

DT Patent
 LA German
 IC C08G
 CC 36-2 (Plastics Manufacture and Processing)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2321884	A1	19731115	DE 1973-2321884	19730430
	JP 49047495	A	19740508	JP 1973-48261	19730426
	JP 56000446	B	19810108		
	FR 2183072	A1	19731214	FR 1973-15385	19730427
	BE 798926	A1	19731030	BE 1973-130593	19730430
	AU 7354986	A	19741031	AU 1973-54986	19730430
	IT 988642	B	19750430	IT 1973-23568	19730430
	AT 7303823	A	19751015	AT 1973-3823	19730430
	AT 331034	B	19760726		
	CH 592122	A5	19771014	CH 1973-6129	19730430
	NL 7306021	A	19731106	NL 1973-6021	19730501
FRAI	GB 1972-20357	A	19720502		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2321884	IC	C08G
	IPCI	C08G0022-44 [ICM]
	IPCR	C08G0018-00 [I,C*]; C08G0018-00 [I,A]; C08G0018-42 [I,A]; C08G0065-00 [I,C*]; C08G0065-26 [I,A]; C08J0009-00 [I,C*]; C08J0009-00 [I,A]
		C08G065/26P3C; C08J009/00R+L75/08
JP 49047495	ECLA	C08G0022-14
	IPCI	C08G0018-00 [I,C*]; C08G0018-00 [I,A]; C08G0018-42 [I,A]; C08G0065-00 [I,C*]; C08G0065-26 [I,A]; C08J0009-00 [I,C*]; C08J0009-00 [I,A]
FR 2183072	IPCI	B29D0027-02 [ICM]; C08G0022-46 [ICS]

BE 798926 IPCR C08G0018-00 [I,C*]; C08G0018-00 [I,A]; C08G0018-42 [I,A]; C08G0065-00 [I,C*]; C08G0065-26 [I,A]; C08J0009-00 [I,C*]; C08J0009-00 [I,A]
 ECLA C08G065/26P3C; C08J009/00R+L75/08
 IPCI C08G [ICM]
 IPCR C08G0018-00 [I,C*]; C08G0018-00 [I,A]; C08G0018-42 [I,A]; C08G0065-00 [I,C*]; C08G0065-26 [I,A]; C08J0009-00 [I,C*]; C08J0009-00 [I,A]
 AU 7354986 IPCI C08G0022-46 [ICM]
 IPCR C08G0018-00 [I,C*]; C08G0018-00 [I,A]; C08G0018-42 [I,A]; C08G0065-00 [I,C*]; C08G0065-26 [I,A]; C08J0009-00 [I,C*]; C08J0009-00 [I,A]
 IT 988642 ECLA C08G065/26P3C; C08J009/00R+L75/08
 IPCI C08G [ICM]
 IPCR C08G0018-00 [I,C*]; C08G0018-00 [I,A]; C08G0018-42 [I,A]; C08G0065-00 [I,C*]; C08G0065-26 [I,A]; C08J0009-00 [I,C*]; C08J0009-00 [I,A]
 AT 7303823 ECLA C08G065/26P3C; C08J009/00R+L75/08
 IPCI C08L0075-08 [ICM]; C08L0075-00 [ICM,C*]; C08K0005-09 [ICS]; C08K0005-00 [ICS,C*]; C08J0009-00 [ICS]
 IPCR C08G0018-00 [I,C*]; C08G0018-00 [I,A]; C08G0018-42 [I,A]; C08G0065-00 [I,C*]; C08G0065-26 [I,A]; C08J0009-00 [I,C*]; C08J0009-00 [I,A]
 CH 592122 ECLA C08G065/26P3C; C08J009/00R+L75/08
 IPCI C08G0018-48 [ICM]; C08G0018-00 [ICM,C*]
 IPCR C08G0018-00 [I,C*]; C08G0018-00 [I,A]; C08G0018-42 [I,A]; C08G0065-00 [I,C*]; C08G0065-26 [I,A]; C08J0009-00 [I,C*]; C08J0009-00 [I,A]
 NL 7306021 ECLA C08G065/26P3C; C08J009/00R+L75/08
 IPCI C08G0022-14 [ICM]
 IPCR C08G0018-00 [I,C*]; C08G0018-00 [I,A]; C08G0018-42 [I,A]; C08G0065-00 [I,C*]; C08G0065-26 [I,A]; C08J0009-00 [I,C*]; C08J0009-00 [I,A]
 AB ECLA C08G065/26P3C; C08J009/00R+L75/08
 Polyurethane foams containing homogenous closed cells, useful for refrigerator linings, were prepared by mixing of storage- and heat-stable polyols stabilized by formic acid [64-18-6] and polyisocyanates. Thus, a mixture containing sucrose 273, propylene oxide 655, ethylene oxide 72, and dimethylaminoethanol catalyst 3.0 kg reacted at 90.deg. to give a polyol (I) of mol. weight 1200, OH number 400 mg KOH/g, pH 11.4 (25% aqueous solution)
 2- to which 1.58 kg aqueous 98% HCO2H was added to adjust pH to 7.3. A mixture (100 parts) containing I 70, polyol (from glycerol and propylene oxide) 30, silicone oil (DC 193) 1, Dabco 33 LV (triethylenediamine) 0.5, Dime 6 (N,N-dimethylcyclohexylamine) 2, and H2O 2 parts, kept 24 hr at 50.deg., was treated with 120 parts diisocyanatodiphenylmethane and 30 parts CFC13 foaming agent to give a foam of content of closed cells 81.8 volume% and heat conductivity (Btu in./ft2/hr/degree F) 0.170, compared with 83.3 and 0.164 for a foam prepared from HCO2H-stabilized I after 0 hr storage. Foams prepared similarly from I containing no HCO2H had 92.8 and 50.4 volume % closed cells, resp., and heat conductivity 0.157 and 0.530, resp., when the I was stored 0 and 24 hr at 50.deg. before use.
 ST stabilizer formic acid polyol; polyurethane foam insulation;
 sucrose polyol heat stabilizer; heat insulation polyurethane foam
 IT Urethane polymers, preparation
 RL: PREP (Preparation)
 (cellular, with closed cells, heat-stabilized polyols for)
 IT Heat stabilizers
 (formic acid, for polyols, in polyurethane manufacture)
 IT Thermal insulation

(polyurethane foams, with closed cells)
 IT 64-18-6, uses and miscellaneous
 RL: MOA (Modifier or additive use); USES (Uses)
 (heat stabilizers, for polyols, for polyurethane foam with closed cells)

L9 ANSWER 44 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1973:45227 CAPLUS

DN 78:45227

OREF 78:7141a,7144a

ED Entered STN: 12 May 1984

TI Applying a cast polyurethane layer to the surface of a polyamide molding

IN Veres, Ladislaus

PA Kabel- und Metallwerke Gutehoffnungshuette A.-G.

SO Ger., 4 pp.

CODEN: GWXXAW

DT Patent

LA German

IC B44D

CC 42-10 (Coatings, Inks, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2142970	A	19720831	DE 1971-2142970	19710827
	DE 2142970	B	19720831		
	DE 2142970	C2	19730405		
PRAI	DE 1971-2142970	A	19710827		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2142970	IC	B44D
	IPCI	B44D0001-22

AB Cast polyurethane elastomer was bonded to a polyamide molding by pretreating the polyamide molding with a formic acid [64-18-6]- β -(dimethylamino)ethanol (I) [108-01-0] mixture with the end of the reaction between HCO₂H and I indicated by methyl red. Thus, the circumference of a polyamide wheel was sprayed with a 1:10 HCO₂H-HCO₂Me solution containing a drop of methyl red and further sprayed with

a 1:10 I-CHC13 solution until the color of the indicator disappeared to give a coated wheel which was molded with a rubbery polyurethane mass to form a polyurethane rim strongly bonded to the polyamide wheel.

ST formate adhesive polyamide; aminoethanol ester adhesive; polyurethane polyamide adhesion

IT Adhesives

((dimethylamino)ethanol-formic acid, for bonding of polyurethane rubber on polyamide wheels)

IT Rubber, urethane, uses and miscellaneous

(casting of, on polyamide wheels, formic acid-(dimethylamino)ethanol adhesives for)

IT Molding of plastics and rubbers

(of urethane rubber, on polyamide wheels, formic acid-(dimethylamino)ethanol adhesives for)

IT Polyamides, uses and miscellaneous

RL: USES (Uses)

(wheels, bonding of polyurethane rubber on, adhesives for)

IT 64-18-6, uses and miscellaneous

RL: USES (Uses)

(adhesives, containing (dimethylamino)ethanol, for bonding polyurethane rubber to polyamide wheels)

IT 108-01-0

RL: USES (Uses)

(adhesives, containing formic acid, for bonding polyurethane rubber to polyamide wheels)

L9 ANSWER 45 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1966:482135 CAPLUS
DN 65:82135
OREF 65:15320f-g
ED Entered STN: 22 Apr 2001
TI Synthesis of heterocyclic compounds. CLIV. Novel methylation. 3.
Methylation of tertiary amines such as pyridine and isoquinoline with
alkyl carboxylates
AU Kametani, Tetsuji; Kigasawa, Kazuo; Hayasaka, Tetsutaro; Hiiragi,
Mineharu; Ishimaru, Haruhide; Asagi, Setsu
CS School Med., Tohoku Univ., Sendai, Japan
SO Journal of Heterocyclic Chemistry (1966), 3(2), 129-36
CODEN: JHTCAD; ISSN: 0022-152X
DT Journal
LA English
CC 37 (Heterocyclic Compounds (One Hetero Atom))
AB cf. CA 63, 6911h; preceding abstract The alkylation of tertiary amines,
namely, 2-dimethylaminoethanol, triethylamine, pyridine, and
isoquinoline with various alkyl carboxylates was investigated. This
reaction afforded the corresponding quaternary ammonium salts, e.g.,
methylation of 2-dimethylaminoethanol with methyl salicylate.
IT Heterocyclic compounds
IT Amines
(alkylation of tertiary, with alkyl carboxylates)
IT Methylation
(of amines (tertiary) with Me carboxylates)
IT Alkylation
(of tertiary amines with alkyl carboxylates)
IT 93-58-3 99-96-7 107-31-3 619-50-1
(Derived from data in the 7th Collective Formula Index (1962-1966))
IT 121-44-8, Triethylamine
(alkylation by alkyl carboxylates)
IT 108-01-0, Ethanol, 2-(dimethylamino)-
(alkylation of)
IT 110-86-1, Pyridine 119-65-3, Isoquinoline
(methylation with alkyl carboxylates)
IT 600-23-7P, Oxalic acid, methyl ester 606-45-1P, o-Anisic acid, methyl
ester 2756-87-8P, Fumaric acid, methyl ester 3878-55-5P, Succinic
acid, methyl ester
RL: PREP (Preparation)
(preparation of)
IT 610-34-4, Benzoic acid, o-nitro-, ethyl ester 615-98-5, Oxalic acid,
dipropyl ester 2050-60-4, Oxalic acid, dibutyl ester 7579-36-4, Oxalic
acid, dibenzyl ester 7579-38-6, Benzoic acid, o-nitro-, benzyl ester
7579-40-0, Benzoic acid, o-chloro-, benzyl ester
(tertiary amine alkylation with)
IT 62-23-7, Benzoic acid, p-nitro- 64-18-6, Formic acid
65-85-0, Benzoic acid 95-92-1, Oxalic acid, diethyl ester 99-76-3,
Benzoic acid, p-hydroxy-, methyl ester 105-34-0, Acetic acid, cyano-,
methyl ester 106-65-0, Succinic acid, dimethyl ester 108-59-8, Malonic
acid, dimethyl ester 547-64-8, Lactic acid, methyl ester 553-90-2,
Oxalic acid, dimethyl ester 554-12-1, Propionic acid, methyl ester
606-27-9, Benzoic acid, o-nitro-, methyl ester 610-96-8, Benzoic acid,
o-chloro-, methyl ester 618-95-1, Benzoic acid, m-nitro-, methyl ester
624-48-6, Maleic acid, dimethyl ester 624-49-7, Fumaric acid, dimethyl
ester 4376-18-5, Phthalic acid, methyl ester
(tertiary amine methylation with)

L9 ANSWER 46 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1963:20566 CAPLUS
 DN 58:20566
 OREF 58:3360g-h
 ED Entered STN: 22 Apr 2001
 TI Isophthalic acid-ethyl carbonate dianhydride
 IN Curtius, Ulrich; Boellert, Volker; Fritz, Gerhard; Nentwig, Joachim
 PA Farbenfabriken Bayer A.-G.
 SO 37 pp.
 DT Patent
 LA Unavailable
 CC 35 (Noncondensed Aromatic Compounds)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	BE 616919		19620515	BE	
	DE 1210853			DE	
	FR 1334980			FR	
	GB 975368			GB	

PRAI DE 19610525

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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AB ClCO2Et is dissolved i 1 CH2Cl2, Me(C18H37)N(CH2)3OH added, m-C6H4(CO2H)2 neutralized with NaOH, the neutral solution poured into the solution of ClCO2Et, the mixture kept at 18-20° 20 min., the 2 phases separated, the aqueous phase extd. with CH2Cl2, and the CH2Cl2 solns. combined,

washed with H2O, dried, and evaporated to give m-C6H4(CO2CO2Et)2 solidification point 23-4°. Other amines used as catalyst are MeN(n-C18H37)2, and Me3(C12H25N+Cl-

IT Amines

(catalysts from tertiary, for dialkyl oxydiformal manufacture)

IT Catalysts and Catalysis

(for dialkyl oxydiformal manufacture, trialkylamines as)

IT 4455-26-9P, Diocetylamine, N-methyl- 99772-22-2P, Hexanamide,

(dimethylamino)-N-dodecyl- 102960-93-0P, Undecanamide,

(dimethylamino)-N-octadecyl-

RL: PREP (Preparation)

(as catalyst for dialkyl oxydiformal manufacture)

IT 108084-10-2, Hexanamide, (dimethylamino)-N-octadecyl-

(as catalyst for dialkyl oxydiformalates)

IT 112-18-5P, Dodecylamine, N,N-dimethyl- 124-28-7P, Octadecylamine,

N,N-dimethyl- 4088-22-6P, Diocetylamine, N-methyl- 10182-91-9P,

Ammonium, dodecyltrimethyl

RL: PREP (Preparation)

(catalysts, for dialkyl oxydiformal manufacture)

IT 1609-47-8P, Formic acid, oxydi-, diethyl ester 4525-32-0P,

Formic acid, oxydi-, dibutyl ester 4525-33-1P, Formic

acid, oxydi-, dimethyl ester 22483-52-9P, Isophthalic acid, dianhydride

with EtHCO3 22483-52-9P, Carbonic acid, ethyl ester, dianhydride with

isophthalic acid 94250-86-9P, Propionic acid, 3-(p-chlorophenoxy)-,

2-(diethylamino)ethyl ester 94250-87-0P, Propionic acid,

3-(p-chlorophenoxy)-, 2-(diethylamino)ethyl ester, hydrochloride

RL: PREP (Preparation)

(preparation of)

IT 75-21-8P, Ethylene oxide

RL: PREP (Preparation)

(reaction products of, with N-methyloctadecylamine, catalysts for

dialkyl oxydiformal manufacture)

IT 75-56-9P, Propylene oxide

RL: PREP (Preparation)

(reaction products with 2-(dimethylamino)ethanol,

as catalysts for dialkyl oxydiformalate manufacture)

IT 2439-55-6P, Octadecylamine, N-methyl-
 RL: PREP (Preparation)
 (reaction products with ethylene oxide, as catalysts for dialkyl
 oxydiformalate manufacture)

IT 108-01-0P, Ethanol, 2-(dimethylamino)- 2439-55-6P, Octadecylamine,
 N-methyl-
 RL: PREP (Preparation)
 (reaction products with propylene oxide, as catalysts for dialkyl
 oxydiformalate manufacture)

IT 75-56-9P, Propylene oxide
 RL: PREP (Preparation)
 (reaction products with N-methyloctadecylamine, as catalysts for
 dialkyl oxydiformalate manufacture)

L9 ANSWER 47 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1963:3344 CAPLUS
 DN 58:3344
 OREF 58:540a-h,541a-c,542a-c
 ED Entered STN: 22 Apr 2001
 TI Dihydrodibenzothiazepines
 IN Yale, Harry L.; Sowinski, Francis A.
 PA Olin Mathieson Chemical Corp.
 SO 8 pp.
 DT Patent
 LA Unavailable
 INCL 260293400
 CC 38 (Heterocyclic Compounds (More Than One Hetero Atom))
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3050524		19620821	US	19610210
	FR 1318032			FR	
	FR M2074			FR	
	GB 993529			GB	
PRAI US			19610210		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3050524	INCL	260293400
	NCL	540/547.000; 250/396.000R; 564/184.000; 564/221.000; 564/418.000; 564/422.000; 564/430.000; 568/044.000

OS MARPAT 58:3344

AB The appropriate o-chloronitrobenzene was refluxed with a suitable benzenethiol in the presence of NaOH to obtain the corresponding 2-nitrophenyl Ph sulfide, reduced with nascent hydrogen to the 2-(phenylthio)aniline derivative This was treated with formic acid to obtain the 2-(phenylthio)formanilide or with an alkanoyl halide to obtain an 11-unsubstituted product or with an arylcarbonyl halide to obtain an 11-substituted product. Treatment with a mixture of polyphosphoric acid and phosphorus oxychloride yielded a dibenzo[b,f]-1,4-thiazepine, reduced with a mixture of LiAlH₄ and AlCl₃ to the corresponding 10,11-dihydrodibenzo[b,f]-1,4-thiazepine; its 10-carbonyl chloride (I) was obtained by treatment with phosgene. Certain of the compds. were useful ataractic agents. Thus, 44 g. NaOH in 100 mL. water was added to 211 g. 2,5-dichloronitrobenzene and 110.2 g. benzenethiol in 500 mL. 95% ethanol and the mixture refluxed 2.5 h. to yield 280.4 g. crude 4-chloro-2-nitrophenyl Ph sulfide (III), m. 83-4° (95% ethanol). To 265.7 g. III, 558 g. iron powder, and 2 l. 95% ethanol was added dropwise 25 mL. concentrated HCl. After the spontaneous reaction had subsided, which occurred on heating the mixture to 55°, the mixture was refluxed 3 h., filtered, and the filtrate concentrated to give 227 g. crude

5-chloro-2-(phenylthio)aniline (IV), m. 62-3°. Treatment with dry HCl in anhydrous ether gave IV hydrochloride, m. 164-6°. A mixture of 221.7 g. III, 460 g. 98% formic acid, and 102.1 g. acetic anhydride was refluxed one hr., concentrated in vacuo, and the residue poured

on

ice to yield 244 g. 5-chloro-2-(phenylthio)formanilide (V), m. 55-6° (benzene-ligroine). Being careful to control foaming, a well blended mixture of 50.0 g. V, 400 g. polyphosphoric acid, and 58.3 g. phosphorus oxychloride was heated 1.5 h. at 120-3° under nitrogen using an ore bath. On cooling, the mixture was treated with crushed ice, made strongly alkaline with concentrated ammonia, and extracted with ether.

The concentrated

ether extract gave 53.7 g. crude 8-chlorodibenzo[b,f]-1,4-thiazepine (VI), m. 78-9° (hexane). To 3.9 g. LiAlH₄ and 13.3 g. AlCl₃ in 100 mL. dry ether was added dropwise 12.3 g. VI in 100 mL. dry ether, which upon work up yielded 12.6 g. crude 8-chloro-10,11-dihydrodibenzo[b,f]-1,4-thiazepine (VII), m. 126-7° (95% ethanol).

10,11-Dihydro-8-(trifluoromethyl)dibenzo[b,f]-1,4-thiazepine, m.

99-100°, was similarly prepared using

phenyl- α,α,α -trifluoro-2-nitro-p-tolyl sulfide, m.

70-1° (absolute ethanol), α,α,α -trifluoro-6-

(phenylthio)m-formotoluidide, m. 55-6° (ligroine), and

8-(trifluoromethyl)dibenzo[b,f]-1,4-thiazepine, m. 83-4°

(ligroine). 10,11-Dihydrodibenzo[b,f]-1,4-thiazepine was similarly prepared using 2-nitrodiphenyl sulfide, m. 77-8°.

2,8-Dichloro-10,11-dihydrodibenzo[b,f]-1,4-thiazepine was similarly prepared To 4.8 g. NaOH in 50 mL. water at 0° was added 9.0 g.

o-(phenylthio)aniline, 25 mL. benzene, and 5.9 g. benzoyl chloride. The mixture was shaken one hr. and the benzene solution worked up to yield 9 g.

2-(phenylthio)benzanilide, m. 69-70° (95% ethanol). Following the

procedure for VI, 11-phenyldibenzo[b,f]-1,4-thiazepine (VIII), m.

110-11°, was obtained. To 9.3 g. anhydrous AlCl₃ and 2.66 g. LiAlH₄

in 250 mL. anhydrous Et₂O was added 10 g. VIII in 200 mL. anhydrous Et₂O, after stirring one hr. and refluxing one more hr. the excess reducing agent destroyed, and the mixture worked up to yield 9 g.

10,11-dihydro-11-phenyldibenzo[b,f]-1,4-thiazepine, m. 105-6°.

Similarly prepared were: 10,11-dihydro-11-methyldibenzo[b,f]-1,4-thiazepine;

10,11-dihydro-8-chloro-11-phenyldibenzo[b,f]-1,4-thiazepine; and

10,11-dihydro-8-(trifluoromethyl)-11-phenyldibenzo[b,f]-1,4-thiazepine.

To a stirred solution of 20.0 g. VII in 150 mL. dry toluene cooled to

-10° was added 170 mL. 9.3% toluene solution of phosgene (also cooled

to -10°) then immediately 7.1 g. pyridine. The mixture was stirred 3

h., allowed to stand overnight, filtered, washed with water, dried over

anhydrous MgSO₄, and concentrated to give 16.3 g. 8-chloro-10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carbonyl chloride (IX), m. 114-15°

(Skellysolve V). Similarly prepared were:

8-(trifluoromethyl)-10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carbonyl

chloride, m. 94-6°; 10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-

carbonyl chloride, m. 114-15° (Skellysolve V);

2,8-dichloro-10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carbonyl

chloride; 10,11-dihydro-11-phenyldibenzo[b,f]-1,4-thiazepine-10-carbonyl

chloride; 10,11-dihydro-11-methyldibenzo[b,f]-1,4-thiazepine-10-carbonyl

chloride; 10,11-dihydro-8-chloro-11-phenyldibenzo[b,f]-1,4-thiazepine-10-

carbonyl chloride; 10,11-dihydro-8-(trifluoromethyl)-11-

phenyldibenzo[b,f]-1,4-thiazepine-10-carbonyl chloride. A mixture of 5.0 g.

IX, 14.3 g. dimethylaminoethanol, and 150 mL. solvent was

refluxed 5 h., the supernatant decanted, and worked up to yield 2.2 g.

8-chloro-10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carboxylic acid;

ester with 2-dimethylaminoethanol (X) m. 86-7°

(ligroine). Similarly prepared were:

10,11-dihydro-8-(trifluoromethyl)dibenzo[b,f]-1,4-thiazepine-10-carboxylic

acid ester of 2-dimethylaminoethanol, m. 76.5-7.5°;

2,8-dichloro-10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carboxylic acid ester of 2-dimethylaminoethanol; 10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carboxylic acid ester of 2-dimethylaminoethanol (XI) in the presence of 50% NaH-mineral oil; 2,8-dichloro-10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carboxylic acid ester of 2-dimethylaminoethanol; 10,11-dihydro-11-phenyldibenzo[b,f]-1,4-thiazepine-10-carboxylic acid ester of 2-dimethylaminoethanol; 10,11-dihydro-11-methyldibenzo[b,f]-1,4-thiazepine-10-carboxylic acid ester of 2-diethylaminoethanol; 10,11-dihydro-8-chloro-11-phenyldibenzo[b,f]-1,4-thiazepine-10-carboxylic acid ester of 2-dimethylaminoethanol; and 10,11-dihydro-8-(trifluoromethyl)-11-phenyldibenzo[b,f]-1,4-thiazepine-10-carboxylic acid ester of 2-dimethylaminoethanol. To a cooled solution 11.3 g. XI in 100 mL. anhydrous Et₂O was added in small portions 5.0 g. maleic acid in 40 mL. acetone to yield 10.3 g. 10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carboxylic acid ester of 2-dimethylaminoethanol monomaleic acid salt, m. 108-10°. A mixture of 10.3 g. IX, 17.3 g. 2-(2-piperidinoethoxy)ethanol, and 150 mL. dry toluene was refluxed. 7 h. and worked up to give 7.8 g. 8-chloro-10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carboxylic acid ester of 2-(2-piperidinoethoxy)ethanol (XII). To 7.8 g. XII in 100 mL. anhydrous Et₂O was added 1.6 g. oxalic acid in 10 mL. acetone, left standing in Et₂O several days, and worked up to give 3.7 g. 8-chloro-10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carboxylic acid ester of 2-(2-piperidinoethoxy)ethanol monooxalic acid salt, m. 99-100° (Me Et ketone). Similarly prepared were: 8-(trifluoromethyl)-10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carboxylic acid ester of 2-(2-piperidinoethoxy)ethanol monooxalic acid salt, m. 104-6°; 10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carboxylic acid ester of 2-(2-piperidinoethoxy)ethanol monooxalic acid salt, t.n. 141-2° (absolute ethanol); 8-chloro-10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carboxylic acid ester of 3-(4-methylpiperazino)propanol hydrochloride. A mixture of 10.3 g. IX, 8.9 g. 2-dimethylaminoethylamine, and 150 mL. dry toluene was refluxed 5 h. and worked up using the procedure for V to give 8-chloro-10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carboxylic acid 2-dimethylaminoethylamide. Similarly prepared were: 10,11-dihydro-8-(trifluoromethyl)dibenzo[b,f]-1,4-thiazepine-10-carboxylic acid 2-dimethylaminoethylamide; 10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carboxylic acid 2-dimethylaminoethylamide; 10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carboxylic acid 2-dimethylaminoethylamide; 2,3-dichloro-10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carboxylic acid 2-dimethylaminoethylamide; 10,11-dihydrophenyldibenzo[b,f]-1,4-thiazepine-10-carboxylic acid 2-dimethylaminoethylamide; 10,11-dihydro-11-methyldibenzo[b,f]-1,4-thiazepine-10-carboxylic acid 2-diethylaminoethylamide; 10,11-dihydro-8-chloro-11-phenyldibenzo[b,f]-1,4-thiazepine-10-carboxylic acid 2-dimethylaminoethylamide; 10,11-dihydro-8-(trifluoromethyl)-11-phenyldibenzo[b,f]-1,4-thiazepine-10-carboxylic acid 2-dimethylaminoethylamide; and 8-chloro-10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carboxylic acid 2-(2-piperidinoethoxy)ethylamide (X). To 4.46 g. X in 100 mL. anhydrous Et₂O was added a warm solution of 0.9 g. oxalic acid in 10 mL. acetone to yield 8-chloro-10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carboxylic acid 2-(2-piperidinoethoxy)ethylamide monooxalic acid salt. Similarly prepared was 8-chloro-10,11-dihydrodibenzo[b,f]-1,4-thiazepine-10-carboxylic acid 3-(4-methylpiperazino)propylamide hydrochloride.

IT 1580-66-1 7586-09-6 36599-14-1

(Derived from data in the 7th Collective Formula Index (1962-1966))

IT 109806-80-6P

RL: SPN (Synthetic preparation); PRP (Properties); PREP (Preparation)
(Dihydrodibenzothiazepines)

IT 3603-43-8, Ethanol, 2-(2-piperidinoethoxy)- 5317-33-9,

1-Piperazinepropanol, 4-methyl-
(esters)

IT 346-44-1P, Sulfide, phenyl α,α,α -trifluoro-2-nitro-p-
tolyl 735-73-9P, m-Formotoluidide,
 α,α,α -trifluoro-6'-(phenylthio)- 790-17-0P,
Dibenzo[b,f][1,4]thiazepine, 10,11-dihydro-8-(trifluoromethyl)-
802-19-7P, Dibenzo[b,f][1,4]thiazepine,
10,11-dihydro-11-phenyl-8-(trifluoromethyl)- 1489-18-5P,
Dibenzo[b,f][1,4]thiazepine, 10,11-dihydro-11-phenyl- 1489-19-6P,
Dibenzo[b,f][1,4]thiazepine, 10,11-dihydro-11-methyl- 1489-21-0P,
Dibenzo[b,f][1,4]thiazepine, 11-phenyl- 1545-76-2P,
Dibenzo[b,f][1,4]thiazepine, 8-(trifluoromethyl)- 1647-55-8P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxamide,
N-[2-(dimethylamino)ethyl]-8-(trifluoromethyl)- 2558-02-3P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxylic acid, 8-(trifluoromethyl)-,
2-(2-piperidinoethoxy)ethyl ester, oxalate 2729-83-1P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxylic acid, 8-(trifluoromethyl)-,
2-(dimethylamino)ethyl ester 2926-88-7P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carbonyl chloride,
8-(trifluoromethyl)- 3526-11-2P, Benzanilide, 2'-(phenylthio)-
3798-57-0P, Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxylic acid,
11-phenyl-8-(trifluoromethyl)-, 2-(dimethylamino)ethyl ester 4171-83-9P,
Sulfide, o-nitrophenyl phenyl 4177-88-2P, Aniline,
5-chloro-2-(phenylthio)-, hydrochloride 4177-89-3P, Formanilide,
5'-chloro-2'-(phenylthio)- 4177-90-6P, Dibenzo[b,f][1,4]thiazepine,
8-chloro- 4177-91-7P, Dibenzo[b,f][1,4]thiazepine,
8-chloro-10,11-dihydro- 4235-20-5P, Aniline, 5-chloro-2-(phenylthio)-
4548-56-5P, Sulfide, 4-chloro-2-nitrophenyl phenyl 4573-64-2P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxamide,
N-[2-(dimethylamino)ethyl]-11-phenyl-8-(trifluoromethyl)- 6764-20-1P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carbonyl chloride 6764-21-2P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carbonyl chloride, 8-chloro-
6764-23-4P, Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxylic acid,
2-(2-piperidinoethoxy)ethyl ester, oxalate 10493-65-9P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxylic acid, 8-(trifluoromethyl)-,
2-(2-piperidinoethoxy)ethyl ester 10493-66-0P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxylic acid,
2-(dimethylamino)ethyl ester 10493-67-1P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxylic acid, 8-chloro-
2-(dimethylamino)ethyl ester 10493-68-2P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxylic acid, 8-chloro-
2-(2-piperidinoethoxy)ethyl ester 10510-67-5P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxylic acid,
2-(dimethylamino)ethyl ester, maleate 10510-68-6P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxylic acid, 8-chloro-
2-(2-piperidinoethoxy)ethyl ester, oxalate 97001-53-1P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carbonyl chloride, 2,8-dichloro-
97407-65-3P, Dibenzo[b,f][1,4]thiazepine-10(11H)-carbonyl chloride,
11-methyl- 98655-42-6P, Dibenzo[b,f][1,4]thiazepine,
8-chloro-10,11-dihydro-11-phenyl- 98741-73-2P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxylic acid, 2,8-dichloro-
2-(dimethylamino)ethyl ester 98762-79-9P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxamide,
2,3-dichloro-N-[2-(dimethylamino)ethyl]- 98980-49-5P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxamide,
8-chloro-N-[2-(dimethylamino)ethyl]- 99997-77-0P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxamide,
N-[2-(dimethylamino)ethyl]- 100151-93-7P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carbonyl chloride, 11-phenyl-
100173-19-1P, Dibenzo[b,f][1,4]thiazepine-10(11H)-carbonyl chloride,
8-chloro-11-phenyl- 100356-54-5P,
Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxamide,

8-chloro-N-[3-(4-methyl-1-piperazinyl)propyl]-, hydrochloride
 100735-21-5P, Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxylic acid,
 8-chloro-, 3-(4-methyl-1-piperazinyl)propyl ester, hydrochloride
 100916-41-4P, Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxamide,
 8-chloro-N-[2-(2-piperidinoethoxy)ethyl]- 101748-62-3P,
 Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxamide,
 N-[2-(diethylamino)ethyl]-11-methyl- 101957-63-5P,
 Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxamide,
 N-[2-(dimethylamino)ethyl]-11-phenyl- 102083-86-3P,
 Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxamide,
 8-chloro-N-[2-(2-piperidinoethoxy)ethyl]-, oxalate 102289-22-5P,
 Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxylic acid, 8-chloro-11-phenyl-,
 2-(dimethylamino)ethyl ester 103283-38-1P,
 Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxylic acid, 11-phenyl-,
 2-(dimethylamino)ethyl ester 106302-02-7P,
 Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxamide,
 8-chloro-N-[2-(dimethylamino)ethyl]-11-phenyl- 106480-71-1P,
 Dibenzo[b,f][1,4]thiazepine, 2,8-dichloro-10,11-dihydro- 106629-93-0P,
 Dibenzo[b,f][1,4]thiazepine-10(11H)-carboxylic acid, 11-methyl-,
 2-(diethylamino)ethyl ester
 RL: PREP (Preparation)
 (preparation of)

IT 494-20-2P, Dibenzo[b,f][1,4]thiazepine, 10,11-dihydro-
 RL: PREP (Preparation)
 (preparation of, derivs.)

L9 ANSWER 48 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1960:100747 CAPLUS
 DN 54:100747
 OREF 54:19089f-h
 ED Entered STN: 22 Apr 2001

TI Rapid paper ionophoresis using organic buffers in water-formamide and
 water-urea

AU Werum, L. N.; Gordon, H. T.; Thornburg, W.
 CS Univ. of California, Berkeley
 SO Journal of Chromatography (1960), 3, 125-45
 CODEN: JOCRAM; ISSN: 0021-9673

DT Journal
 LA English
 CC 2 (General and Physical Chemistry)

AB The following organic buffers, in 30% formamide, were used for rapid paper
 ionophoresis in a micro apparatus (buffer and pH given): formate
 -pyridine 3.3, 2-(dimethylamino)ethanol (I)-HCO₂H 4.0,
 I-AcOH 4.7, 2,2'-iminodipropionitrile-AcOH 6.0,
 2-(dimethylamino)propionitrile-AcOH 7.2, N-ethylmorpholine-8.0, I-AcOH-H₂O
 9.3, I-H₃BO₃ 9.3. As many as 5 different buffers were used
 simultaneously. Charged substances moved as compact spots, without
 adsorption on paper, and with constant mobility in 1-3 hrs. Mobilities were
 measured relative to a set of com. reference dyes, consisting of Amaranth,
 Apollon, Brilliant Blue FCF, and quinacrine-HCl. From mobility values it
 was sometimes possible to estimate the mol. weight, pK value of some acidic or
 basic groups, and the presence of borate-complexing groups. The procedure
 can be applied to the separation and characterization of amino acids, peptides,
 carbohydrates, and proteins (if formamide is replaced by 10% urea).

IT Amaranth (the dye)
 (as reference dye in paper ionophoresis)

IT Amino acids
 Peptides
 Proteins
 (electrophoresis of)

IT Carbohydrates
 (electrophoresis of, on paper)

IT Electrophoresis, Electrochromatography
 (with buffers (organic))
 IT Morpholine, 4-ethyl-, mixture with HOAc
 (as buffer in paper ionophoresis)
 IT Apolon
 (as reference dye in paper ionophoresis)
 IT Glycine, N-alanyl-
 (electrophoresis (paper) of)
 IT 100-74-3 915-67-3 926-77-2 1999-33-3
 (Derived from data in the 6th Collective Formula Index (1957-1961))
 IT 69-05-6, Quinacrine, hydrochloride 3844-45-9, Brilliant Blue FCF
 (as reference dye in paper ionophoresis)
 IT 2869-25-2, Propionitrile, 2,2'-iminodi- 5350-67-4, Propionitrile,
 2-dimethylamino-
 (buffer from HOAc and, in paper ionophoresis)
 IT 10043-35-3, Boric acid
 (buffer solution from 2-dimethylaminoethanol and, in paper
 ionophoresis)
 IT 64-19-7, Acetic acid
 (buffer systems, in paper ionophoresis)
 IT 56-12-2, Butyric acid, 4-amino- 107-95-9, β -Alanine 556-33-2,
 Glycine, N-(N-glycylglycyl)- 556-50-3, Glycine, N-glycyl- 3695-73-6,
 Alanine, N-glycyl- 32729-21-8, Asparagine, glycyl-
 (electrophoresis (paper) of)
 IT 50-99-7, D-Glucose 56-40-6, Glycine 56-41-7, Alanine 56-45-1, Serine
 56-84-8, Aspartic acid 56-86-0, Glutamic acid 57-50-1, Sucrose
 63-42-3, Lactose 71-00-1, Histidine 74-79-3, Arginine 147-85-3,
 Proline 407-41-0, Serine, phosphate 407-41-0, Serine, phosphate
 3458-28-4, Mannose 7664-38-2, Phosphoric acid
 (electrophoresis of)
 IT 64-18-6, Formic acid
 (mixts. of, with 2-dimethylaminoethanol and with pyridine, as
 buffers in paper ionophoresis)
 IT 110-86-1, Pyridine
 (mixts. of, with HCO₂H, as buffer in paper ionophoresis)
 IT 108-01-0, Ethanol, 2-dimethylamino-
 (mixts. with HOAc, H₃BO₃ and HCO₂H, as buffers in paper ionophoresis)
 IT 1071-23-4, Ethanol, 2-amino-, phosphate
 (paper electrophoresis of)

L9 ANSWER 49 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1959:112026 CAPLUS

DN 53:112026

OREF 53:20137h-i, 20138a-b

ED Entered STN: 22 Apr 2001

TI Sterol aminoalkyl carbonates

IN Bergstrom, Clarence G.

PA G.D. Searle and Co.

DT Patent

LA Unavailable

CC 10J (Organic Chemistry: Steroids)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2889318		19590602	US 1957-640990	19570218

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2889318	IPCR	C07D0211-00 [I,C*]; C07D0211-08 [I,A]; C07J0041-00 [I,A]; C07J0041-00 [I,C*]; C07J0075-00 [I,A]; C07J0075-00 [I,C*]
	NCL	540/113.000; 552/544.000

AB A method is given for the preparation of the title compds., which are useful as depressants of the central nervous system. Over 45 min. excess COC12 is introduced into a stirred solution of cholesterol 260 in Et2O 1850 parts, the solution kept at room temperature 18 hrs., a stream of N conducted through the solution an addnl. 2 hrs., the solution distilled to dryness in vacuo, and the residue recrystd. from Me2CO, to yield 5-cholesten-3 β -yl chloroformate (I), m. 122-3.5°. 120 in Me2CO 160 is refluxed, 2-dimethylaminoethanol 4 added gradually, the mixture refrigerated, the precipitate filtered off and recrystd. from either CHCl3-petr. ether or Me2CO-CHCl3 to yield 5-cholesten-3 β -yl dimethylaminoethyl carbonate-HCl (II.HCl), m. 206-8°. II.HCl 10 in CHCl3 750 is treated with saturated aqueous NaHCO3 250 with stirring, the CHCl3 washed with

2

H2O, dried, MeI 55 parts added, the mixture allowed to stand 4 days, filtered, and the residue recrystd. to give II.MeI, m. 204-8°. II in Et2O treated with HBr in iso-PrOH gives II.HBr. Prepared similarly, are: 5-cholesten-3 β -yl diethylaminoethyl carbonate-HCl, m. 179-83°, and the 5-cholesten-3 β -corresponding methiodide, m. 193-5°, 5-cholesten-3 β -yl 3-diethylaminopropyl carbonate-HCl, m. 186-9°, 5-cholesten-3 β -yl dibutylaminoethyl carbonate-HCl, m. 184-7°, 5-cholesten-3 β -yl 3-dibutylaminopropyl carbonate-HCl, m. 183-8°, 5-cholesten-3 β -yl morpholinoethyl carbonate-HCl, m. 210-24°, 5-cholesten-3 β -yl 2,6-dimethylpiperidinoethyl carbonate-HCl, 5-cholesten-3 β -yl 2-pyridylmethyl carbonate, 24-ethyl-5-cholesten-3 β -yl chloroformate, 24-ethyl-5-cholesten-3 β -yl dimethylaminoethyl carbonate-HCl, m. 217-20° (decomposition), and 24-ethyl-5,22-cholestadien-3 β -yl dimethyl-aminoethyl carbonate-HCl.

IT Sterols

(aminoalkyl carbonates)

IT Alcohols

(aminoalkyl, sterol carbonates)

IT Nervous system

(blocking agents or depressants for central, sterol aminoalkyl carbonates as)

IT 7144-08-3 119599-25-6 119621-82-8 119640-73-2 120024-35-3

120037-07-2 121144-27-2 121159-34-0

(Derived from data in the 6th Collective Formula Index (1957-1961))

IT 57-88-5, Cholesterol

(aminoalkyl carbonates, and derivs.)

IT 806646-09-3, β -Sitosterol, carbonate, 2-dimethylaminoethyl ester

(and derivs.)

IT 220858-97-9, Ethanol, 2-dimethylamino-, carbonate

(ester with cholesterol and derivs.)

IT 463-79-6, Carbonic acid

(esters, with aminoalkyl alcs. and sterols)

IT 463-73-0, Formic acid, chloro-

(esters, with cholesterol derivs.)

IT 463-73-0P, Formic acid, chloro-, esters, with cholesterol

120036-59-1P, 1-Propanol, 3-dibutylamino-, carbonate, cholesteryl ester,

hydrochloride 121159-29-3P, 1-Propanol, 3-diethylamino-, carbonate,

cholesteryl ester, hydrochloride 121193-57-5P, Stigmasterol, carbonate,

2-dimethylaminoethyl ester, hydrochloride 807297-20-7P, Ammonium,

diethyl(2-hydroxyethyl)methyl-, carbonate, cholesteryl ester

885459-83-6P, 4-Morpholineethanol, carbonate, cholesteryl ester,

hydrochloride 896442-03-8P, Ethanol, 2-dibutylamino-, carbonate,

cholesteryl ester, hydrochloride 896442-10-7P, Ethanol, 2-diethylamino-,

carbonate, cholesteryl ester, hydrochloride 909265-30-1P, Choline,

iodide carbonate, cholesteryl ester

RL: PREP (Preparation)

(preparation of)

L9 ANSWER 50 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1956:79053 CAPLUS
 DN 50:79053
 OREF 50:14978c-d
 ED Entered STN: 22 Apr 2001
 TI Isolation of radioformaldehyde in the metabolism of
 dimethylaminoethanol-C14H3
 AU Johnston, John M.; Mackenzie, Cosmo G.
 CS Univ. of Colorado School of Med., Denver
 SO Journal of Biological Chemistry (1956), 221, 301-5
 CODEN: JBCHA3; ISSN: 0021-9258
 DT Journal
 LA Unavailable
 CC 11H (Biological Chemistry: Pharmacology)
 AB cf. C.A. 48, 8289d. Dimethylaminoethanol-C14H3 (I) was
 synthesized from monomethylaminoethanol, HCO2H, and C14H2O. The specific
 activity of the product indicates that in this reaction CH2O, and not
 formate, is the sole source of the Me C atom. When I was
 incubated with a whole-liver homogenate, C14H2O accumulated and was
 isolated as the dimedon derivative. Addition of semicarbazide to the incubation
 mixture increased the yield of C14H2O 3-fold. The implications of these
 results are discussed with respect to the pathway of
 dimethylaminoethanol metabolism
 IT Metabolism, animal
 (of dimethylaminoethanol)
 IT 14762-75-5P, Carbon, isotope of mass 14
 RL: PREP (Preparation)
 (as indicator, of HCHO formation from dimethylaminoethanol in
 liver preparation)
 IT 108-01-0P, Ethanol, 2-dimethylamino-
 RL: PREP (Preparation)
 (formaldehyde formation from, in liver homogenates)
 IT 9003-33-2P, Poly(divinyl formal)
 RL: PREP (Preparation)
 (formation of, from dimethylaminoethanol by liver homogenate)
 IT 371173-16-9P, Ethanol, 2-(methylmethyl-C14-amino)-
 RL: PREP (Preparation)
 (preparation of)

L9 ANSWER 51 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1955:49727 CAPLUS
 DN 49:49727
 OREF 49:9705d-g
 ED Entered STN: 22 Apr 2001
 TI Conversion of N-methylglycines to active formaldehyde and serine
 AU MacKenzie, Cosmo G.
 CS Univ. of Colorado School of Med., Denver
 SO Symposium on Amino Acid Metabolism [Proceedings] (1955) 684-726
 CODEN: 11YDAL
 DT Journal
 LA Unavailable
 CC 11A (Biological Chemistry: General)
 AB Washed rat-liver mitochondria catalyzed the oxidative demethylation of
 dimethylglycine to HCHO and sarcosine. Sarcosine, in turn, was oxidized
 to glycine and HCHO. In both the reactions, the active formaldehyde (AF)
 was the immediate product which could irreversibly convert to HCHO.
 Alternatively, AF could condense with glycine to yield L-serine. The
 nature of AF is not known but it is not identical with aminolevulinic acid
 of Shemin (cf. C.A. 48, 2145h) or the tetrafollic acid derivative of Sakami.
 Expts. with CD3NHCH2COOH (100 atom % excess of D) showed that AF possessed
 an oxidative level of HCHO. No similar oxidative demethylation could
 happen to monomethylaminoethanol, dimethylaminoethanol, choline,

betaine, methylamine, or dimethylamine. Methoxyacetic and methylthioglycolic acids were found to be potent competitive inhibitors in the oxidation. The formation of AF in washed liver mitochondria did not require addition of exogenous coenzymes, such as diphosphopyridine nucleotide or adenine flavine dinucleotide. D-Alanine, but not L-alanine or pyruvate, reduced the serine synthesis but increased O consumption from sarcosine. No HCl4HO was isolated when methyl-labeled methionine was incubated with liver slices or mitochondria. M. suggested that biologically labile methyl groups circulated via AF as well as by other processes (transmethylation) without passing through HCHO or formate.

- IT Mitochondria (chondriomes, chondriosomes)
(dimethylglycine conversion to active formaldehyde and sarcosine in liver)
- IT Methyl group
(labile, active HCHO and)
- IT 107-97-1, Sarcosine
(dimethylglycine conversion to, in liver mitochondria)
- IT 42854-62-6, Alanine, D-, benzyl ester, p-toluenesulfonate
(effect on dimethylglycine conversion to serine in liver mitochondria)
- IT 625-45-6, Acetic acid, methoxy-
(effect on oxidative demethylation of dimethylglycine in liver mitochondria)
- IT 1118-68-9P, Glycine, N,N-dimethyl-
RL: PREP (Preparation)
(formation of active formaldehyde and sarcosine from, in liver mitochondria)
- IT 56-40-6P, Glycine
RL: PREP (Preparation)
(formation of, from sarcosine in liver mitochondria)
- IT 9003-33-2P, Poly(divinyl formal)
RL: PREP (Preparation)
(formation of, from N,N-dimethylglycine in mitochondria of liver)
- IT 56-45-1P, Serine
RL: PREP (Preparation)
(formation of, from N-methyl glycine in mitochondria of liver)
- IT 118685-91-9, Sarcosine-methyl-d3
(in active HCHO expts.)
- IT 64-19-7, Acetic acid
(sarcosine oxidation inhibition by)

L9 ANSWER 52 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1955:12687 CAPLUS

DN 49:12687

OREF 49:2573g-i

ED Entered STN: 22 Apr 2001

TI The role of vitamin B6 and the biosynthesis of choline in the excised tomato root

AU Boll, Wm. Geo.

CS Univ. of Texas, Austin

SO Archives of Biochemistry and Biophysics (1954), 53, 20-8

CODEN: ABBI44; ISSN: 0003-9861

DT Journal

LA Unavailable

CC 11D (Biological Chemistry: Botany)

AB cf. C.A. 49, 446i. The following substances replace pyridoxine to a greater or lesser degree in the nutrition of a clone of excised tomato roots: DL-valine, L-valine, DL-norvaline, L-serine, DL-norleucine, DL-cystathionine, L-methionine, L-isoleucine, L-lysine, L-phenylalanine, DL-leucine, L-leucine, DL- α -aminobutyric acid, ethanolamine, dimethylaminoethanol, choline, glycolic acid, and formate
. Ethanolamine does not act as a precursor of vitamin B6. The data

support the view that choline is formed in the excised tomato root by methylation of ethanolamine; that ethanolamine is formed on decarboxylation of serine by an enzyme containing a component of vitamin B6; that norvaline is involved in normal metabolism; and that vitamin B6 is involved, directly or indirectly, in the biosynthesis of other substances listed above.

- IT Tomatoes
(choline formation in excised roots of, vitamin B6 in)
- IT 56-45-1, Serine 56-87-1, Lysine 56-88-2, Cystathionine 63-68-3, Methionine 63-91-2, Alanine, phenyl- 64-18-6, Formate 72-18-4, Valine 73-32-5, Isoleucine 79-14-1, Glycolic acid 141-43-5, Ethanol, 2-amino- 327-57-1, Norleucine 2835-81-6, Butyric acid, 2-amino-
(as vitamin B6 substitute for tomato roots)
- IT 61-90-5, Leucine
(as vitamin B6 substitute for tomato roots, other)
- IT 108-01-0, Ethanol, 2-dimethylamino- 6600-40-4, Norvaline
(as vitamin B6 substitute in tomato roots)
- IT 62-49-7P, Choline
RL: PREP (Preparation)
(formation of, in tomato roots, vitamin B6 in)
- IT 8059-24-3P, Vitamin, B6
RL: PREP (Preparation)
(in choline formation in tomato roots)
- L9 ANSWER 53 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1951:30162 CAPLUS
DN 45:30162
OREF 45:5255a-c
ED Entered STN: 22 Apr 2001
TI Biosynthesis of choline methyl groups by the rat
AU Arnstein, H. R. V.
CS Natl. Inst. Med. Research, Mill Hill, London
SO Biochemical Journal (1951), 48, 27-32
CODEN: BIJOAK; ISSN: 0264-6021
DT Journal
LA Unavailable
CC 11E (Biological Chemistry: Nutrition)
AB Addition of choline or betaine to a methionine-free diet enables white rats to use homocystine as the sole S-containing amino acid for growth. Both choline and methionine act as donors of labile CH3 groups, and only betaine and dimethylthetin can replace them. On the contrary, dimethylaminoethanol, though it is a precursor of choline and prevents fatty livers or hemorrhagic kidneys in rats, is not available for growth, presumably because the CH3 groups are not labile. The in vivo synthesis of choline is not sufficiently rapid to supply CH3 groups for optimum growth. The biosynthesis was investigated by feeding D- and L-(β -C14)-serine, (α -C14)-glycine, (C14OOH)-glycine, (C14)-methanol, or (C14)-formate to adult rats. The L-serine is converted to ethanolamine by loss of the COOH group, but D-serine does not function as a precursor of choline. MeOH, formate, β -C of L-serine or the α -C (not the carboxyl) of glycine are all precursors of choline CH3 groups. But neither the CO2 arising from in vivo oxidation of D-(β -C14)-serine or from (C14OOH)-glycine are such precursors.
- IT Methyl group
(of choline)
- IT 56-45-1, Serine 64-18-6, Formate 67-56-1, Methanol
(as choline precursor)
- IT 14762-75-5P, Carbon, isotope of mass 14
RL: PREP (Preparation)
(as indicator, of choline methyl group formation)
- IT 56-40-6P, Glycine

RL: PREP (Preparation)
 (choline formation from)
 IT 62-49-7, Choline
 (methyl group of, origin of)

L9 ANSWER 54 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1951:19509 CAPLUS
 DN 45:19509
 OREF 45:34661,3467a-c
 ED Entered STN: 22 Apr 2001
 TI Synthesis of labile methyl groups by the rat
 AU Sakami, Warwick; Welch, Arnold D.
 CS Western Reserve Univ., Cleveland, O.
 SO Journal of Biological Chemistry (1950), 187, 379-84
 CODEN: JBCHA3; ISSN: 0021-9258
 DT Journal
 LA Unavailable
 CC 11E (Biological Chemistry: Nutrition)
 AB Five days prior to, and during, the experiment 100 g. rats were fed asynthetic amino acid diet rich in methionine (1.25%) and containing no glycine, serine, cystine, choline, or ethanolamine. They were given subcutaneous injections of 0.2 ml. 0.15 M C14-labeled Na formate (9.6 + 106 counts per min. per millimole) at the beginning of the first hr., and 0.15 ml. for each of 10 succeeding hrs. The animals were then sacrificed, and the abdominal viscera were homogenized with acetone, extracted with Et2O-EtOH, trichloroacetic acid, acetone, and dried. The dry protein was demethylated with boiling HI, and the MeI formed was converted into tetramethylammonium iodide (I) with trimethylamine. The activity of I corresponded to 354 counts per min. per mg. methionine methyl C. Formation of labile methyl groups was also found in expts. with rat liver slices (6 g.) incubated for 4 hrs. in a medium containing labeled formate (8.8 + 106 counts/min.), and nonisotopic homocysteine, dimethylaminoethanol, folic acid, and crystalline vitamin B12. Methionine and choline were each isolated and converted to I. The isotopic activity of I corresponded to 540 counts per min. per mg. methionine methyl C, and 530 counts per min. per mg. choline methyl C. Folic acid may be involved in the metabolism of 1-carbon compds., such as formic acid.
 IT Methyl group
 (formation of labile)
 IT Metabolism, animal
 (of carbon (C1) compds., folic acid in)
 IT Nutrition, animal
 (survey of)
 IT 14762-75-5P, Carbon, isotope of mass 14
 RL: PREP (Preparation)
 (as indicator, of labile Me group formation)
 IT 63-68-3, Methionine
 (carbon-14 in, after administration of labeled HCOONa)
 IT 62-49-7P, Choline
 RL: PREP (Preparation)
 (formation of, from Na formate)
 IT 59-30-3, Folic acid
 (in metabolism of 1-carbon compds.)
 IT 141-53-7P, Sodium formate
 RL: PREP (Preparation)
 (in methyl group (labile) synthesis in animal organism)

L9 ANSWER 55 OF 55 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1947:25565 CAPLUS
 DN 41:25565
 OREF 41:5095h-i,5096a-h

ED Entered STN: 22 Apr 2001

TI Influence of chemical constitution upon toxicity. I. Compounds related to "doryl"

AU Haworth, Robert D.; Lamberton, Alex. H.; Woodcock, David

CS Univ. Sheffield, UK

SO Journal of the Chemical Society (1947) 176-82

CODEN: JCSOA9; ISSN: 0368-1769

DT Journal

LA Unavailable

CC 10 (Organic Chemistry)

AB In a study of the influence of chemical constitution upon toxicity, the quaternary NH_4 salt group was selected for preliminary investigation partly on account of the solubility of these compds. in H_2O and partly in view of the physiol. activity of various derivs. of choline. The high toxicity of doryl, $\text{H}_2\text{NCO}_2(\text{CH}_2)_2\text{NMe}_3\text{Cl}$, was confirmed but a wide range of homologs and analogs was found to exhibit lower toxicity. $\text{Cl}(\text{CH}_2)_2\text{OCOC}\text{Cl}$ (I), b. 152° , results from 12 g. $\text{HO}(\text{CH}_2)_2\text{Cl}$ and COCCl_2 on standing in a sealed tube 70 h. at 15° ; other chloroformates: 4-chlorobutyl, b10 89° ; 5-chloropentyl, b15 $125-30^\circ$; 6-chlorohexyl, b12 120° ; 8-chlorooctyl, b12 130° ; 9-chlorononyl, b15 137° ; 10-chlorodecyl, b12 170° . I (6.5 g.), gradually treated (shaking and cooling) with 15 cc. 15% NH_4OH , gives 4.6 g. $\text{Cl}(\text{CH}_2)_2\text{OCONH}_2$, m. 76° . In other cases 2.1 mol of the amine in 5 vols. C_6H_6 is added to 1 mol of the chloroformate in 5 vols. C_6H_6 and, after 1 h., the filtrate from the amine-HCl is washed with dilute HCl and the product distilled or crystallized 2-Iodopropyl carbamate (?) (by refluxing 12

h. the Cl derivative and NaI in EtOH), m. $74-6^\circ$. 2-Chloroethyl alkylcarbamates: Pr, b10 138° ; allyl, b10 130° ; benzyl, m. 48° ; di-Me, b16 92° ; di-Et, b13 100° ; di-Pr, b20 135° ; pentamethylene, $\text{C}_5\text{H}_{10}\text{NCO}_2\text{CH}_2\text{CH}_2\text{Cl}$, b17 135° ; dibenzyl, m. 64° . 2-Iodoethyl benzylcarbamate, m. 92° . Chloroalkyl carbamates: 3-chloropropyl, m. 58° ; 4-chlorobutyl, m. 74° ; 5-chloroamyl, m. 78° ; 6-chlorohexyl, m. 70° ; 8-chlorooctyl, m. 83° ; 9-chlorononyl, m. 77° ; 10-chlorodecyl, m. 84° . Doryl (a type of the quaternary NH_4 salts) can be prepared from 10 cc. Me_3N and 6 g. $\text{H}_2\text{NCO}_2\text{CH}_2\text{CH}_2\text{Cl}$ on heating 16 h. at $110-20^\circ$; careful temperature control is often necessary and anhydrous solvents should be used for crystallization. The chloride with NaI in cold absolute EtOH gives the iodide. The reactions of $\text{H}_2\text{NCO}_2\text{CH}_2\text{CH}_2\text{Cl}$ and the Pr homolog with Et_3N , Pr_3N , and Am_3N were studied at temps. from 15° to 180° , both in the absence and presence of solvents (ether, C_6H_6 , and PhCH_2OH) but gave only the HCl salts of the amines. In the following, the m.p. and L.D.50 (mg./kg.) are given. Derivs. of trimethyl(2-hydroxyethyl)ammonium chloride: urethane (doryl), 207° , 3; N-methylurethane, 173° , 15; N-ethylurethane, $196-200^\circ$, 60; N-propylurethane, $203-7^\circ$, 15; N-allylurethane, $167-73^\circ$, 37.5; N-phenylurethane, 192° , 37.5; N,N-dipropylurethane, m. 99° , 75. Derivs. of trimethyl(2-hydroxyethyl)ammonium iodide: urethane, 193° , 4.5; N-benzylurethane, m. 96° , 62.5; N,N-dimethylurethane, 202° , 178; N,N-diethylurethane, m. 114° , 42.5; 1-piperidylformate, 208° , 18.5; vinyl ether, 177° , 33; N-methylthiourethane, 237° (decomposition), 40; N,N-dibenzylurethane, $119-21^\circ$, 75° . Trimethyl(3-hydroxypropyl)ammonium chloride urethane, $207-9^\circ$, 37.5; 4-hydroxybutyl homolog, $212-13^\circ$, 12.5; 5-hydroxamyl homolog, $195-7^\circ$, 22; 6-hydroxyhexyl homolog, $211-12^\circ$, 100; 8-hydroxyoctyl homolog, 205° , 200; 9-hydroxynonyl homolog, 199° , 185; 10-hydroxydecyl homolog, 202° , 75. Triethyl(2-hydroxyethyl)ammonium iodide urethane, m. 205° , 395; N-phenylurethane, 128° , 450. I (4 g.) and 3.5 g. Me_2NNH_2 in 50 cc. C_6H_6 , reacting in the cold for 15 min. $\text{Me}_2\text{NNH}_2\cdot\text{HCl}$ removed, and the residue from the C_6H_6 heated in a sealed tube 5 h. at

110-20°, give 2-keto-4,4-dimethyl-2,3,5,6-tetrahydro-1,3,4-oxadiazinium chloride, m. 184°, 194.
 4-(2-Hydroxyethyl)morpholine-MeCl urethane, m. 138°, 194. 2-Dimethylaminoethanol urethane-HCl, m. 144-7°, 1000-2000;
 N-methylthiourea-HCl, m. 97°, 100. Me
 2-dimethylaminoethanesulfonate-HCl, m. 97°, 100. Doryl has L.D.50 of 3 mg./kg. for mice and 0.25, mg./kg. for cats and dogs; it has a constrictor action on the pupil of a cat but this property was not found with the homologs. Replacement of 1 or both of the amide H atoms by alkyl groups and an increase in the number of CH₂ groups diminish toxicity. There is some alteration in toxicity with increasing chain length but higher homologs are definitely less toxic than lower members. Replacement of the NH₂ groups in compds. of the doryl type by hydrazide or other radicals results in substances of low toxicity. The high toxicity in the doryl series depends upon the presence of both urethane and quaternary NH₄ groupings.

- IT Toxicity
 (chemical constitution and)
- IT Morpholinium compounds, 4-(2-hydroxyethyl)-4-methyl-, chloride carbamate
 RL: PREP (Preparation)
- IT Carbamic acid, dibenzyl-
 (esters)
- IT 627-11-2P 2114-18-3P 20074-88-8P 20485-86-3P 20485-87-4P
 114947-88-5P 412308-23-7P 1087717-99-4P
 RL: SPN (Synthetic preparation); PRP (Properties); PREP (Preparation)
 (Influence of chemical constitution upon toxicity. I. Compounds related to "doryl")
- IT 59-99-4, Neostigmine
 (compds. related to)
- IT 107-07-3, Ethanol, 2-chloro- 108-01-0, Ethanol, 2-dimethylamino-
 463-73-0, Formic acid, chloro- 928-51-8, 1-Butanol, 4-chloro-
 2009-83-8, 1-Hexanol, 6-chloro- 5259-98-3, 1-Pentanol, 5-chloro-
 5957-17-5, Ammonium, triethyl(2-hydroxyethyl)-, iodide 7260-94-8,
 Carbamic acid, dimethyl- 13406-98-9, 1-Piperidinecarboxylic acid
 23144-52-7, 1-Octanol, 8-chloro- 24579-70-2, Carbamic acid, diethyl-
 36887-74-8, Carbamic acid, methylthiono- 50853-31-1, Carbamic acid,
 allyl- 51308-99-7, 1-Nonanol, 9-chloro- 51309-10-5, 1-Decanol,
 10-chloro- 66384-75-6, Carbamic acid, propyl- 69777-50-0, Carbamic
 acid, dipropyl- 85600-10-8, Carbamic acid, benzyl-
 (esters)
- IT 62-49-7, Choline
 (esters, and related compds.)
- IT 674-38-4P, Bethanechol
 RL: PREP (Preparation)
 (preparation and toxicity of)
- IT 98-04-4P, Ammonium, trimethylphenyl-, iodide 6140-15-4P, Ammonium,
 trimethyl-p-tolyl-, iodides 6326-12-1P, 1-Propanol, 3-chloro-, carbamate
 6414-57-9P, Carbamic acid, methyl-, esters with choline chloride
 7409-13-4P, Carbamic acid, ethyl-, esters, with choline chloride
 24586-04-7P, Ammonium, trimethyl(2-vinylxyethyl)-, iodide 33046-97-8P,
 Ammonium, trimethyl-m-tolyl-, iodides 63867-32-3P, 2H-1,3,4-Oxadiazinium
 compounds, tetrahydro-4,4-dimethyl-2-oxo-, chloride 63981-62-4P,
 Ammonium, (10-hydroxydecyl)trimethyl-, chloride, carbamate 63981-83-9P,
 Ammonium, (4-hydroxybutyl)trimethyl-, chloride, carbamate 64046-02-2P,
 Ammonium, (5-hydroxypentyl)trimethyl-, chloride, carbamate 856376-66-4P,
 Ethanol, 2-iodo-, benzylcarbamate 857169-16-5P, Ammonium,
 (6-hydroxyhexyl)trimethyl-, chloride, carbamate 857233-59-1P,
 1-Propanol, 3-iodo-, carbamate 858824-43-8P, Ammonium,
 (8-hydroxyoctyl)trimethyl-, chloride, carbamate 858824-52-9P, Ammonium,
 (9-hydroxynonyl)trimethyl-, chloride, carbamate 860707-75-1P, Taurine,
 N,N-dimethyl-, methyl ester, hydrochloride
 RL: PREP (Preparation)

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        (preparation of)
IT 621-77-2, Triptethylamine
    (reaction with 2-haloethyl carbamate)
IT 121-44-8, Triethylamine
    (reactions of, with haloethyl carbamate)
IT 102-69-2, Tripropylamine
    (reactions with 2-haloethyl carbamate)

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=> d his

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        (FILE 'HOME' ENTERED AT 12:57:44 ON 19 MAR 2009)

        FILE 'REGISTRY' ENTERED AT 12:58:22 ON 19 MAR 2009
            E N,N-DIMETHYLETHANOLAMMONIUM FORMATE/CN
            E E2
L1      1 S E3

        FILE 'CAPLUS' ENTERED AT 13:01:52 ON 19 MAR 2009
L2      1 S US20070185330/PN
L3      2 S DIMETHYLETHANOLAMMONIUM AND FORMATE

        FILE 'CAPLUS' ENTERED AT 13:15:01 ON 19 MAR 2009

        FILE 'REGISTRY' ENTERED AT 13:15:11 ON 19 MAR 2009
L4      2 S 59101-30-3/RN OR 53518-18-6/RN

        FILE 'CAPLUS' ENTERED AT 13:16:40 ON 19 MAR 2009
            S 59101-30-3/REG#

        FILE 'REGISTRY' ENTERED AT 13:18:46 ON 19 MAR 2009
L5      1 S 59101-30-3/RN

        FILE 'CAPLUS' ENTERED AT 13:18:47 ON 19 MAR 2009
L6      6 S L5
L7      56 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND (FORMIC O
L8      0 S IONIC AND L7
L9      55 S L7 NOT L6

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=> s (dimethylaminoethanol or dimethylamino ethanol) and ionic
    2798 DIMETHYLAMINOETHANOL
    77799 DIMETHYLAMINO
    324073 ETHANOL
    1061 DIMETHYLAMINO ETHANOL
        (DIMETHYLAMINO(W)ETHANOL)
    304581 IONIC
L10     62 (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND IONIC

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=> s (dimethylaminoethanol or dimethylamino ethanol) and (ionic liquid#)
    2798 DIMETHYLAMINOETHANOL
    77799 DIMETHYLAMINO
    324073 ETHANOL
    1061 DIMETHYLAMINO ETHANOL
        (DIMETHYLAMINO(W)ETHANOL)
    304581 IONIC
    980632 LIQUID#
    13902 IONIC LIQUID#
        (IONIC(W)LIQUID#)
L11     6 (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND (IONIC LIQU
        D#)

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=> d 1-6 all

L11 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2007:1252115 CAPLUS
 DN 148:223050
 ED Entered STN: 05 Nov 2007
 TI Solvent extraction of U(VI) by task specific ionic
 liquids bearing phosphoryl groups
 AU Ouadi, Ali; Klimchuk, Olga; Gaillard, Clotilde; Billard, Isabelle
 CS Institut Pluridisciplinaire Hubert Curien, DRS, ULP, CNRS, IN2P3,
 Strasbourg, 67037, Fr.
 SO Green Chemistry (2007), 9(11), 1160-1162
 CODEN: GRCHFJ; ISSN: 1463-9262
 PB Royal Society of Chemistry
 DT Journal
 LA English
 CC 68-2 (Phase Equilibriums, Chemical Equilibriums, and Solutions)
 OS CASREACT 148:223050
 AB A novel class of hydrophobic ionic liqs. based on quaternary ammonium
 cation and bearing phosphoryl groups was synthesized. The preliminary
 results of U(VI) extraction from aqueous solution into the ionic liquid are
 presented.
 ST uranyl extn phosphoryl ammonium ionic liq
 IT Quaternary ammonium compounds, properties
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);
 PROC (Process)
 (alkyl; uranyl solvent extraction of U(VI) by task specific ionic liqs.
 bearing phosphoryl groups)
 IT Ionic liquids
 Partition
 Solvent extraction
 (uranyl solvent extraction of U(VI) by task specific ionic liqs. bearing
 phosphoryl groups)
 IT 16637-16-4, Uranyl ion(2+) 258273-75-5
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);
 PROC (Process)
 (uranyl solvent extraction of U(VI) by task specific ionic liqs. bearing
 phosphoryl groups)
 IT 1005000-61-2P 1005000-62-3P
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN
 (Synthetic preparation); PREP (Preparation); PROC (Process)
 (uranyl solvent extraction of U(VI) by task specific ionic liqs. bearing
 phosphoryl groups)
 IT 108-01-0, 2-(Dimethylamino)ethanol 109-55-7,
 3-(Dimethylamino)-1-propylamine 682-76-8, Dibutyl vinylphosphonate
 819-43-2, Dibutyl chlorophosphate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (uranyl solvent extraction of U(VI) by task specific ionic liqs. bearing
 phosphoryl groups)
 IT 1013924-26-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (uranyl solvent extraction of U(VI) by task specific ionic liqs. bearing
 phosphoryl groups)
 RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
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L11 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:681182 CAPLUS

DN 145:145001

ED Entered STN: 14 Jul 2006

TI Preparation of quaternary ammonium compounds as base stable ionic liquids

IN Earle, Martyn John; Frohlich, Ute; Huq, Susanne; Katdare, Suhas; Lukasik, Rafal Marcin; Bogel, Ewa; Plechkova, Natalia Vladimirovna; Seddon, Kenneth Richard

PA The Queen's University of Belfast, UK

SO PCT Int. Appl., 35 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM B01J

CC 21-2 (General Organic Chemistry)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2006072785	A2	20060713	WO 2006-GB21	20060104
WO 2006072785	A3	20070426		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA			
EP 1841533	A2	20071010	EP 2006-700224	20060104
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU			
JP 2008526822	T	20080724	JP 2007-549949	20060104
MX 2007008160	A	20080122	MX 2007-8160	20070703
KR 2007101301	A	20071016	KR 2007-717744	20070731
CN 101137436	A	20080305	CN 2006-80005669	20070822
PRAI GB 2005-28	A	20050104		
WO 2006-GB21	W	20060104		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2006072785	ICM	B01J
	IPCI	B01J0031-02 [I,C]; B01J0031-02 [I,A]; C07C0045-00

		[I,C]; C07C0045-74 [I,A]; C07C0209-00 [I,C]; C07C0209-60 [I,A]
	IPCR	B01J0031-02 [I,C]; B01J0031-02 [I,A]; C07C0045-00 [I,C]; C07C0045-66 [I,A]; C07C0045-67 [I,A]; C07C0045-72 [I,A]; C07C0045-73 [I,A]; C07C0045-74 [I,A]; C07C0209-00 [I,C]; C07C0209-60 [I,A]; C07C0211-00 [I,C*]; C07C0211-63 [I,A]; C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0217-00 [I,C*]; C07C0217-08 [I,A]; C07C0221-00 [I,C*]; C07C0221-00 [I,A]; C07C0225-00 [N,C*]; C07C0225-12 [N,A]; C07D0211-00 [I,C*]; C07D0211-14 [I,A]; C07D0231-00 [I,C*]; C07D0231-12 [I,A]; C07D0487-00 [I,C*]; C07D0487-04 [I,A]
	ECLA	B01J031/02C; B01J031/02D; B01J031/02G; B01J031/02G2; C07C045/66+49/637; C07C045/66+49/203; C07C045/66+49/647; C07C045/67+49/603; C07C045/67+49/597; C07C045/72+49/17; C07C045/72+49/497; C07C045/72+49/493; C07C045/73+49/403; C07C045/74+49/203; C07C211/63; C07C215/40; C07C217/08; C07C221/00; C07D211/14; C07D231/12B1; C07D487/04+241D+241D+2; C07D487/04+239C+209C; L01J; L01J; L01J; L01J; L01J; L01J; L01J; L01J; L01J; L01J; L01J; M07C; M07C; M07D; M07D
EP 1841533	IPCI	B01J0031-02 [I,A]; C07C0209-60 [I,A]; C07C0209-00 [I,C*]; C07C0045-74 [I,A]; C07C0045-00 [I,C*]
	IPCR	B01J0031-02 [I,C]; B01J0031-02 [I,A]; C07C0045-00 [I,C]; C07C0045-66 [I,A]; C07C0045-67 [I,A]; C07C0045-69 [I,A]; C07C0045-72 [I,A]; C07C0045-73 [I,A]; C07C0045-74 [I,A]; C07C0209-00 [I,C]; C07C0209-60 [I,A]; C07C0211-00 [I,C]; C07C0211-62 [I,A]; C07C0211-63 [I,A]; C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0217-00 [I,C]; C07C0217-08 [I,A]; C07C0221-00 [I,C]; C07C0221-00 [I,A]; C07C0225-00 [N,C*]; C07C0225-12 [N,A]; C07D0211-00 [I,C]; C07D0211-14 [I,A]; C07D0231-00 [I,C]; C07D0231-12 [I,A]; C07D0487-00 [I,C]; C07D0487-04 [I,A]; C07D0487-08 [I,A]
	ECLA	B01J031/02C; B01J031/02D; B01J031/02G; B01J031/02G2; C07C045/66+49/637; C07C045/66+49/203; C07C045/66+49/647; C07C045/67+49/603; C07C045/67+49/597; C07C045/72+49/17; C07C045/72+49/497; C07C045/72+49/493; C07C045/73+49/403; C07C045/74+49/203; C07C211/63; C07C215/40; C07C217/08; C07C221/00; C07D211/14; C07D231/12B1; C07D487/04+241D+241D+2; C07D487/04+239C+209C; L01J; L01J; L01J; L01J; L01J; L01J; L01J; L01J; L01J; L01J; L01J; M07C; M07C; M07D; M07D
JP 2008526822	IPCI	C07B0061-00 [I,A]; C07C0221-00 [I,A]; C07C0225-12 [I,A]; C07C0225-00 [I,C*]; C07C0049-623 [I,A]; C07C0049-203 [I,A]; C07C0049-403 [I,A]; C07C0045-72 [I,A]; C07C0049-603 [I,A]; C07C0049-00 [I,C*]; C07C0045-74 [I,A]; C07C0045-00 [I,C*]; C07C0211-63 [N,A]; C07C0211-00 [N,C*]; C07C0215-08 [N,A]; C07C0215-00 [N,C*]; C07F0009-54 [N,A]; C07F0009-00 [N,C*]
	FTERM	4H006/AA02; 4H006/AA03; 4H006/AB83; 4H006/AC13; 4H006/AC21; 4H006/AC22; 4H006/AC28; 4H006/AC52; 4H006/AD40; 4H050/AA03; 4H050/AB83
MX 2007008160	IPCI	B01J0031-02 [I,C]; C07C0209-60 [I,A]; C07C0209-00 [I,C*]; C07C0045-74 [I,A]; C07C0045-00 [I,C*]
KR 2007101301	IPCI	B01J0031-02 [I,A]; C07C0313-00 [I,A]; C07C0045-66 [I,A]; C07C0045-00 [I,C*]

CN 101137436 IPCI B01J0031-02 [I,A]; C07C0209-60 [I,A]; C07C0209-00 [I,C*]; C07C0045-74 [I,A]; C07C0045-00 [I,C*]

OS MARPAT 145:145001

AB The present invention relates to novel base stable ionic liqs. such as N-alkyl-N,N-dimethylethanolamine salts, N-alkyl-DABCO salts, N-alkyl-tetramethylethylenediamine salts, and N-alkyl-N-methylpyrazolium salts and uses thereof as solvents in chemical reactions, especially base catalyzed

chemical

reactions and reactions comprising the use of strong bases. Chemical reactions include Mannich reaction, Robinson annulation, Michael reaction, Heck reaction, epoxidn., hydrogenation, aldol condensation, transesterification, esterification, hydrolysis, oxidation, reduction,

hydration,

dehydration, substitution, aromatic substitution, addition (including to carbonyl groups), elimination, polymerization, depolymn., oligomerization, dimerization, coupling, electrocyclisation, isomerization, carbene formation, epimerization, inversion, rearrangement, photochem., microwave assisted, thermal, sonochem. and disproportionation reactions. Thus, N-alkylation of 2-(dimethylamino)ethanol by Pr iodide and treatment of the resulting N-(2-hydroxyethyl)-N,N-dimethyl-N-propylammonium iodide with LiNTf₂ (Tf = CF₃SO₂) gave PrMe₂N+CH₂CH₂OH.[NTf₂]-. Cyclopentanone was condensed with pentanal in the presence of L-propine catalyst in EtMe₂N+CH₂CH₂OH.[NTf₂]- at room temperature for 18 h to give 94% 2-pentyl-2-cyclopenten-1-one.

ST aldol condensation quaternary ammonium compd solvent prepn; quaternary ammonium compd prepn solvent base stable ionic liq; Mannich reaction Robinson annulation Michael reaction solvent ionic liq; alkyl(dimethylethanolamine salt prepn solvent base stable ionic liq; alkyl DABCO salt prepn solvent base stable ionic liq; alkyltetramethylethylenediamine salt prepn solvent base stable ionic liq; alkylmethylpyrazolium salt prepn solvent base stable ionic liq

IT Arylation

(Heck; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Cyclization

(Robinson annulation; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Substitution reaction

(aromatic; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Cyclization

(electrocyclic; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Carbenes (methylene derivatives)

RL: SPN (Synthetic preparation); PREP (Preparation)

(formation; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Substitution reaction, nucleophilic

(inversion reaction; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Microwave

(microwave assisted reactions; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Polymerization

(oligomerization; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Solvents

(organic; preparation of quaternary ammonium compds. as base stable ionic

liqs.

as solvents in base-catalyzed chemical reactions)

IT Addition reaction

Aldol condensation

Autoxidation
 Coupling reaction
 Dehydration reaction
 Depolymerization
 Dimerization
 Disproportionation
 Elimination reaction
 Epoxidation
 Hydration, chemical
 Hydrogenation
 Hydrolysis
 Ionic liquids
 Isomerization
 Mannich reaction
 Michael reaction
 Photolysis
 Polymerization
 Rearrangement
 Reduction
 Substitution reaction
 Transesterification

- (preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)
- IT Quaternary ammonium compounds, preparation
 RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)
- IT Reaction
 (sonochem. reactions; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)
- IT Reaction
 (thermal; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)
- IT 78-59-1 123-42-2 141-79-7 504-20-1 27203-92-5
 RL: PRPH (Prophetic)
 (Preparation of quaternary ammonium compounds as base stable ionic liquids)
- IT 111-66-0P, 1-Octene 111-67-1P, 2-Octene 898256-56-9P,
 1,3,5-Trimethylpyrazole hydrobromide
 RL: BYP (Byproduct); PREP (Preparation)
 (preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)
- IT 123-75-1, Pyrrolidine, uses 147-85-3, L-Proline, uses 1305-62-0,
 Calcium hydroxide, uses 1310-73-2, Sodium hydroxide, uses 4111-54-0,
 Lithium diisopropylamide 6552-73-4, Sodium methoxide-d3 7789-23-3D,
 Potassium fluoride, supported on alumina 14014-06-3, Sodium hydroxide-d
 20734-58-1, Proton sponge
 RL: CAT (Catalyst use); USES (Uses)
 (preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)
- IT 898256-55-8P
 RL: NUU (Other use, unclassified); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)
- IT 4535-70-0P, N-Ethyl-N-(2-hydroxyethyl)-N,N-dimethylammonium bromide
 7009-61-2P, N-Dodecyl-N-(2-hydroxyethyl)-N,N-dimethylammonium bromide
 13186-62-4P, N-(2-Hydroxyethyl)-N,N-dimethyl-N-propylammonium bromide
 15061-91-3P, N-(2-Hydroxyethyl)-N,N-dimethyl-N-octadecylammonium bromide
 28228-54-8P, N-(2-Hydroxyethyl)-N-hexyl-N,N-dimethylammonium chloride
 28508-15-8P, N-Butyl-N-(2-hydroxyethyl)-N,N-dimethylammonium bromide

33249-14-8P 39995-55-6P, N-Decyl-N-(2-hydroxyethyl)-N,N-dimethylammonium
bromide 50938-57-3P 62634-05-3P 62634-13-3P 62634-16-6P
62634-17-7P 122135-71-1P, N-(2-Hydroxyethyl)-N,N-dimethyl-N-
octylammonium bromide 123714-89-6P,
N-Decyl-N-[2-(dimethylamino)ethyl]-N,N-dimethylammonium bromide
171874-92-3P 202256-55-1P 202256-57-3P 214349-74-3P 219787-58-3P,
N-Hexyl-N-(2-hydroxyethyl)-N,N-dimethylammonium bromide 342789-81-5P
783354-56-3P 852509-35-4P 854102-71-9P 863031-17-8P 885456-22-4P
898256-40-1P 898256-41-2P, N-(2-Butoxyethyl)-N-octyl-N,N-
dimethylammonium bromide 898256-42-3P,
N-[2-(Hexyloxy)ethyl]-N-hexyl-N,N-dimethylammonium bromide 898256-43-4P,
N-(2-Butoxyethyl)-N-butyl-N,N-dimethylammonium bromide 898256-44-5P,
N,N-Dimethyl-N-octyl-N-[2-(octyloxy)ethyl]ammonium bromide 898256-45-6P,
N-Decyl-N-[2-(decyloxy)ethyl]-N,N-dimethylammonium bromide 898256-46-7P,
N-Ethyl-N-(2-hydroxyethyl)-N,N-dimethylammonium tetrafluoroborate
898256-47-8P, N-Ethyl-N-(2-hydroxyethyl)-N,N-dimethylammonium
trifluoromethanesulfonate 898256-48-9P,
N-(2-Hydroxyethyl)-N,N-dimethyl-N-propylammonium tetrafluoroborate
898256-49-0P, N-(2-Hydroxyethyl)-N,N-dimethyl-N-propylammonium
trifluoromethanesulfonate 898256-50-3P 898256-51-4P 898256-52-5P
898256-53-6P, N-[2-(Dimethylamino)ethyl]-N,N-dimethyl-N-pentylammonium
bromide 898256-54-7P, N-[2-(Dimethylamino)ethyl]-N,N-dimethyl-N-
octylammonium bromide 898256-57-0P 898256-59-2P 898256-60-5P
898256-61-6P 898256-62-7P 898256-63-8P 898256-64-9P 898256-65-0P
898256-66-1P 898256-68-3P 898256-70-7P 898256-72-9P 898256-74-1P
898256-75-2P 898256-76-3P 898256-77-4P 898256-78-5P 898256-79-6P
898256-80-9P 898256-82-1P 898256-83-2P 898256-84-3P 898256-85-4P
898256-86-5P

RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP
(Preparation); USES (Uses)

(preparation of quaternary ammonium compds. as base stable ionic liqs. as
solvents in base-catalyzed chemical reactions)

IT 1128-08-1P, Dihydrojasmane

RL: PNU (Preparation, unclassified); PREP (Preparation)
(preparation of quaternary ammonium compds. as base stable ionic liqs. as
solvents in base-catalyzed chemical reactions)

IT 64-17-5, Ethanol, reactions 71-23-8, n-Propanol, reactions 71-36-3,
n-Butanol, reactions 71-41-0, n-Pentanol, reactions 74-96-4, Ethyl
bromide 78-94-4, Methyl vinyl ketone, reactions 106-94-5, n-Propyl
bromide 107-08-4, Propyl iodide 108-01-0, 2-(Dimethylamino)
ethanol 108-94-1, Cyclohexanone, reactions 109-65-9, n-Butyl
bromide 110-18-9, N,N,N',N'-Tetramethylethylenediamine 110-53-2,
Pentyl bromide 110-62-3, Pentanal 110-91-8, Morpholine, reactions
111-25-1, n-Hexyl bromide 111-27-3, n-Hexanol, reactions 111-83-1,
n-Octyl bromide 111-87-5, n-Octanol, reactions 112-29-8, n-Decyl
bromide 112-30-1, 1-Decanol 112-53-8, 1-Dodecanol 112-71-0,
n-Tetradecyl bromide 112-72-1, n-Tetradecanol 112-82-3, n-Hexadecyl
bromide 112-89-0, n-Octadecyl bromide 112-92-5, n-Octadecanol
120-92-3, Cyclopentanone 124-63-0, Methanesulfonyl chloride 143-15-7,
n-Dodecyl bromide 280-57-9, DABCO 504-02-9, 1,3-Cyclohexanedione
544-10-5, n-Hexyl chloride 930-36-9 1072-91-9, 1,3,5-Trimethylpyrazole
1122-58-3, 4-Dimethylaminopyridine 1193-55-1,
2-Methylcyclohexane-1,3-dione 16940-81-1, Hexafluorophosphoric acid
21324-39-0, Sodium hexafluorophosphate 30525-89-4, Paraformaldehyde
36653-82-4, n-Hexadecanal 90076-65-6, Lithium
bis(trifluoromethanesulfonimide)

RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of quaternary ammonium compds. as base stable ionic liqs. as
solvents in base-catalyzed chemical reactions)

IT 62-50-0P, Ethyl methanesulfonate 1912-31-8P, Propyl methanesulfonate
1912-32-9P, Butyl methanesulfonate 3240-94-6P, 2-(Morpholin-4-yl)ethyl
chloride 5073-65-4P, 2-Methyl-2-(3-oxobutyl)cyclohexane-1,3-dione

6222-16-8P, Tetradecyl methanesulfonate 6968-20-3P, Pentyl methanesulfonate 16156-50-6P, Hexyl methanesulfonate 16156-52-8P, Octyl methanesulfonate 16424-35-4P, 2-Pentylidenecyclopentanone 20779-14-0P, Hexadecyl methanesulfonate 26942-62-1P, 2-(3-Oxobutyl)cyclohexanone 32492-73-2P, N-(2-Hydroxyethyl)-N,N-dimethyl-N-propylammonium iodide 34084-81-6P, 2-(3-Oxobutyl)cyclohexane-1,3-dione 41233-29-8P, Decyl methanesulfonate 42558-01-0P, 2-(1-Hydroxypentyl)cyclopentanone 159438-86-5P, Undecyl methanesulfonate

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT 100-58-3, Phenylmagnesium bromide

RL: RGT (Reagent); RACT (Reactant or reagent)

(preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT 1196-55-0P, 2,3,4,4a,5,6,7,8-Octahydronaphthalen-2-one 24071-91-8P,

2-[(Morpholin-4-yl)methyl]cyclohexanone 25564-22-1P,

2-Pentyl-2-cyclopenten-1-one 42576-97-6P,

1,2,3,4,6,7,8-Octahydronaphthalene-1,6-dione 99178-63-9P,

4-[2-(Dimethylamino)ethoxy]ethylmorpholine 100348-93-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Anon; DE 10247578 A1 CAPLUS

(2) Anon; US 20040097755 A1 CAPLUS

(3) Anon; WO 2004029004 A1 CAPLUS

(4) Anon; US 6552232 B2 CAPLUS

L11 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:681152 CAPLUS

DN 145:145000

ED Entered STN: 14 Jul 2006

TI Preparation of quaternary ammonium compounds as basic ionic liquids

IN Earle, Martyn John; Seddon, Kenneth Richard; Forsyth, Stewart; Frohlich, Ute; Gunaratne, Nimal; Katdare, Suhas

PA The Queen's University of Belfast, UK

SO PCT Int. Appl., 51 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM B01J

CC 21-2 (General Organic Chemistry)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006072775	A2	20060713	WO 2006-GB6	20060104
WO 2006072775	A3	20070426		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,			

	GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA	
EP 1853385	A2 20071114	EP 2006-700155 20060104
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU	
JP 2008526821	T 20080724	JP 2007-549946 20060104
KR 2007104899	A 20071029	KR 2007-717743 20070731
CN 101137437	A 20080305	CN 2006-80005670 20070822
PRAI GB 2005-29	A 20050104	
WO 2006-GB6	W 20060104	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2006072775	ICM IPCI	B01J B01J0031-02 [I,C]; B01J0031-02 [I,A]; C07B0037-00 [I,C]; C07B0037-04 [I,A]; C07C0045-00 [I,C]; C07C0045-62 [I,A]; C07C0045-69 [I,A]; C07C0045-72 [I,A]; C07C0209-00 [I,C]; C07C0209-60 [I,A]; C07D0301-00 [I,C]; C07D0301-12 [I,A]
	IPCR	B01J0031-02 [I,C]; B01J0031-02 [I,A]; B01J0031-16 [N,C*]; B01J0031-22 [N,A]; C07B0037-00 [I,C]; C07B0037-04 [I,A]; C07B0061-00 [I,C*]; C07B0061-00 [I,A]; C07C0045-00 [I,C]; C07C0045-51 [I,A]; C07C0045-62 [I,A]; C07C0045-66 [I,A]; C07C0045-67 [I,A]; C07C0045-69 [I,A]; C07C0045-72 [I,A]; C07C0045-73 [I,A]; C07C0045-74 [I,A]; C07C0209-00 [I,C]; C07C0209-60 [I,A]; C07C0211-00 [I,C*]; C07C0211-63 [I,A]; C07C0217-00 [I,C*]; C07C0217-08 [I,A]; C07D0213-00 [I,C*]; C07D0213-73 [I,A]; C07D0233-00 [I,C*]; C07D0233-54 [I,A]; C07D0301-00 [I,C]; C07D0301-12 [I,A]; C07D0303-00 [I,C*]; C07D0303-32 [I,A]
	ECLA	C07C217/08; B01J031/02B; B01J031/02C; B01J031/02E; B01J031/02E4; B01J031/02G; B01J031/02G2; C07B061/00; C07C045/51B2/47/228; C07C045/62/47/228; C07C045/66/49/637; C07C045/66/49/203; C07C045/66/49/603; C07C045/66/49/647; C07C045/67/49/603; C07C045/67/49/597; C07C045/72/49/17; C07C045/72/49/497; C07C045/72/49/707; C07C045/73/49/403; C07C045/74/49/203; C07C045/74/49/647; C07C211/63; C07D213/73B; C07D233/54C; C07D303/32; L01J; L01J; L01J; L01J; L01J; L01J; L01J; L01J; L01J; M07D
EP 1853385	IPCI	B01J0031-02 [I,A]; C07D0301-12 [I,A]; C07D0301-00 [I,C*]; C07C0209-60 [I,A]; C07C0209-00 [I,C*]; C07C0045-72 [I,A]; C07C0045-69 [I,A]; C07C0045-62 [I,A]; C07C0045-00 [I,C*]; C07B0037-04 [I,A]; C07B0037-00 [I,C*]
	IPCR	B01J0031-02 [I,C]; B01J0031-02 [I,A]; B01J0031-16 [N,C*]; B01J0031-22 [N,A]; C07B0037-00 [I,C]; C07B0037-04 [I,A]; C07B0061-00 [I,C*]; C07B0061-00 [I,A]; C07C0045-00 [I,C]; C07C0045-51 [I,A]; C07C0045-62 [I,A]; C07C0045-66 [I,A]; C07C0045-67 [I,A]; C07C0045-69 [I,A]; C07C0045-72 [I,A]; C07C0045-73 [I,A]; C07C0045-74 [I,A]; C07C0209-00 [I,C]; C07C0209-60 [I,A]; C07C0211-00 [I,C*]; C07C0211-63 [I,A]; C07C0217-00 [I,C*]; C07C0217-08 [I,A]; C07D0213-00 [I,C*]; C07D0213-73 [I,A]; C07D0233-00 [I,C*]; C07D0233-54 [I,A]; C07D0301-00 [I,C]; C07D0301-12 [I,A]; C07D0303-00 [I,C*]; C07D0303-32 [I,A]

ECLA C07C217/08; B01J031/02B; B01J031/02C; B01J031/02E; B01J031/02E4; B01J031/02G; B01J031/02G2; C07B061/00; C07C045/51B2+47/228; C07C045/62+47/228; C07C045/66+49/637; C07C045/66+49/203; C07C045/66+49/603; C07C045/66+49/647; C07C045/67+49/603; C07C045/67+49/597; C07C045/72+49/17; C07C045/72+49/497; C07C045/72+49/707; C07C045/73+49/403; C07C045/74+49/203; C07C045/74+49/647; C07C211/63; C07D213/73B; C07D233/54C; C07D303/32; L01J; L01J; L01J; L01J; L01J; L01J; L01J; L01J; M07D

JP 2008526821 IPCI C07C0211-62 [I,A]; C07C0211-00 [I,C*]; C07C0309-04 [I,A]; C07C0309-00 [I,C*]; C07C0217-08 [I,A]; C07C0311-09 [I,A]; C07C0311-00 [I,C*]; C07C0217-74 [I,A]; C07C0217-00 [I,C*]; C07C0213-00 [I,A]; C07C0225-12 [I,A]; C07C0225-00 [I,C*]; C07C0221-00 [I,A]; C07C0049-637 [I,A]; C07C0045-66 [I,A]; C07C0049-603 [I,A]; C07C0049-00 [I,C*]; C07C0045-62 [I,A]; C07C0047-228 [I,A]; C07C0047-20 [I,C*]; C07C0045-71 [I,A]; C07C0045-00 [I,C*]; C07C0255-41 [I,A]; C07C0255-00 [I,C*]; C07C0253-30 [I,A]; C07C0253-00 [I,C*]; C07D0453-02 [I,A]; C07D0453-00 [I,C*]; C07D0213-74 [I,A]; C07D0213-00 [I,C*]; C07D0295-08 [I,A]; C07D0295-00 [I,C*]; C07D0301-12 [I,A]; C07D0301-00 [I,C*]; C07D0303-12 [I,A]; C07D0303-00 [I,C*]; C07D0233-64 [I,A]; C07D0233-00 [I,C*]; C07D0207-06 [I,A]; C07D0207-00 [I,C*]; C07B0061-00 [N,A]

FTERM 4C048/AA01; 4C048/BB15; 4C048/CC01; 4C048/UU03; 4C048/XX02; 4C048/XX05; 4C055/AA04; 4C055/BA01; 4C055/CA01; 4C055/DA52; 4C055/DB02; 4C055/FA01; 4C055/FA37; 4C064/AA06; 4C064/CC02; 4C064/DD01; 4C064/EE01; 4C064/FF03; 4C064/GG01; 4C064/HH04; 4C069/AA02; 4C069/BB02; 4C069/BB16; 4C069/BB34; 4C069/CC13; 4H006/AA01; 4H006/AA03; 4H006/AB40; 4H006/AB80; 4H006/AC11; 4H006/AC25; 4H006/AC28; 4H006/AC41; 4H006/BB19; 4H006/BB24; 4H006/BJ20; 4H006/BJ50; 4H006/BN20; 4H006/BP10; 4H006/BP30; 4H006/BR70; 4H006/BU50; 4H039/CA19; 4H039/CA40; 4H039/CA41; 4H039/CA42; 4H039/CE90; 4H039/CF30; 4H039/CH10; 4H039/CH20

KR 2007104899 IPCI B01J0031-02 [I,A]; B01J0031-00 [I,A]; B01D0011-04 [I,A]

CN 101137437 IPCI B01J0031-02 [I,A]; C07D0301-12 [I,A]; C07D0301-00 [I,C*]; C07C0209-60 [I,A]; C07C0209-00 [I,C*]; C07C0045-72 [I,A]; C07C0045-69 [I,A]; C07C0045-62 [I,A]; C07C0045-00 [I,C*]; C07B0037-04 [I,A]; C07B0037-00 [I,C*]

OS CASREACT 145:145000; MARPAT 145:145000

AB This invention relates to preparation and use of ionic liqs. as solvents in base-catalyzed chemical reactions wherein the ionic liquid is composed of at least one species of cation and at least one species of anion, characterized in that a cation of the ionic liquid comprises a pos. charge moiety and a basic moiety, and further wherein such ionic liqs. may be used as promoters or catalysts for the chemical reactions. Chemical reactions include Heck Reaction, Suzuki coupling, nucleophilic displacement reactions, hydrolysis, esterification, transesterification, aldol reactions, epoxidn., hydrogenation, condensation, oxidation reduction, hydration, dehydration, substitution, aromatic substitution, addition (including to carbonyl groups), elimination, polymerization, depolymn., oligomerization, dimerization, coupling, electrocyclic, isomerization, carbene formation, epimerization, inversion, rearrangement, photochem., microwave assisted,

thermal, sonochem. and disproportionation reactions. Thus, etherification of 2-(dimethylamino)ethanol with 2-(diisopropylamino)ethanol hydrochloride followed by regioselective quaternization with Et bromide and treatment with lithium bis(triflimide) gave a room temperature ionic liquid of formula $\text{PrNMe}_2\text{N}+\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{N}(\text{i-Pr})_2\cdot\text{N}-(\text{SO}_2\text{CF}_3)_2$ (I). Epoxidn. of chalcone in this ionic liquid I gave chalcone epoxide with 100% conversion.

ST quaternary ammonium compd prepn solvent catalyst ionic liq

IT Arylation
(Heck; preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Substitution reaction
(aromatic; preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Cyclization
(electrocyclic; preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Carbenes (methylene derivatives)
RL: SPN (Synthetic preparation); PREP (Preparation)
(formation; preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Reaction
(inversion; preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Reaction
(microwave-assisted; preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Polymerization
(oligomerization; preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Addition reaction

Aldol condensation

Condensation reaction

Coupling reaction

Dehydration reaction

Depolymerization

Dimerization

Disproportionation

Elimination reaction

Epimerization

Epoxidation

Hydration, chemical

Hydrogenation

Hydrolysis

Ionic liquids

Isomerization

Oxidation

Photolysis

Polymerization

Rearrangement

Reduction

Substitution reaction

Substitution reaction, nucleophilic

Suzuki coupling reaction

Transesterification
(preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Quaternary ammonium compounds, uses
RL: CAT (Catalyst use); NUU (Other use, unclassified); USES (Uses)
(preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Reaction
(sonochem.; preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Reaction
(thermal; preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT 78-59-1 123-42-2 141-79-7 504-20-1 15409-60-6 67382-39-2
123134-25-8
RL: PRPH (Prophetic)
(Preparation of quaternary ammonium compounds as basic ionic liquids)

IT 147-85-3, L-Proline, uses 3375-31-3
RL: CAT (Catalyst use); USES (Uses)
(preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT 898535-34-7P
RL: CAT (Catalyst use); NUU (Other use, unclassified); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT 33249-14-8P 50938-57-3P 62634-05-3P 62634-13-3P 62634-16-6P
62634-17-7P 106303-35-9P 114203-57-5P,
4-(Dimethylamino)-1-ethylpyridinium bromide 123714-89-6P 171874-92-3P
171894-19-2P, N-[2-(Dimethylamino)ethyl]-N,N-dimethyl-N-octadecylammonium
bromide 202256-55-1P 202256-57-3P 214349-74-3P 289910-39-0P,
N-Ethyl-N-[2-(dimethylamino)ethyl]-N,N-dimethylammonium bromide
395677-61-9P, 4-(Dimethylamino)-1-hexylpyridinium bromide 783354-56-3P
863031-17-8P 898256-51-4P 898256-52-5P 898256-53-6P,
N-[2-(Dimethylamino)ethyl]-N,N-dimethyl-N-pentylammonium bromide
898256-54-7P, N-[2-(Dimethylamino)ethyl]-N,N-dimethyl-N-octylammonium
bromide 898256-84-3P, 4-(Dimethylamino)-1-ethylpyridinium
methanesulfonate 898256-85-4P 898535-32-5P 898535-36-9P
898535-38-1P 898535-40-5P 898535-42-7P 898535-44-9P 898535-44-9P
898535-47-2P 898535-49-4P 898535-51-8P 898535-53-0P
RL: CAT (Catalyst use); NUU (Other use, unclassified); SPN (Synthetic
preparation); PREP (Preparation); USES (Uses)
(preparation of quaternary ammonium compds. as basic ionic liqs. in
base-catalyzed chemical reactions)

IT 62-50-0, Ethyl methanesulfonate 74-96-4, Ethyl bromide 75-03-6, Ethyl
iodide 78-94-4, Vinyl methyl ketone, reactions 94-41-7, Chalcone
96-79-7, 2-(Diisopropylamino)ethyl chloride 100-52-7, Benzaldehyde,
reactions 105-56-6, Ethyl cyanoacetate 106-94-5, n-Propyl bromide
108-01-0, N,N-Dimethylethanolamine 109-65-9, n-Butyl bromide 110-18-9,
N,N,N',N'-Tetramethylethylenediamine 110-53-2, n-Pentyl bromide
110-62-3, Pentanal 111-18-2 111-25-1, n-Hexyl bromide 111-83-1,
n-Octyl bromide 112-29-8, n-Decyl bromide 112-71-0, n-Tetradecyl
bromide 112-82-3, n-Hexadecyl bromide 112-89-0, n-Octadecyl bromide
120-92-3, Cyclopentanone 120-94-5, 1-Methylpyrrolidine 143-15-7,
n-Dodecyl bromide 280-57-9, DABCO 504-02-9, 1,3-Cyclohexanedione
513-42-8, 2-Methyl-2-propenol 542-69-8, n-Butyl iodide 598-56-1,
N-Ethylidimethylamine 616-47-7, 1-Methyl-1H-imidazole 1122-58-3,
4-Dimethylaminopyridine 1193-55-1, 2-Methylcyclohexane-1,3-dione
1704-62-7, 2-[2-(Dimethylamino)ethoxy]ethanol 3647-69-6,
1-(Morpholin-4-yl)-2-chloroethane hydrochloride 4261-68-1,
2-(Diisopropylamino)ethyl chloride hydrochloride 5073-65-4,
2-Methyl-2-(3-oxobutyl)cyclohexane-1,3-dione 13586-68-0 16156-50-6,
Hexyl methanesulfonate 35779-04-5, 4-tert-Butyl-1-iodobenzene
90076-65-6, Lithium bis(trifluoromethanesulfonimide)
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of quaternary ammonium compds. as basic ionic liqs. in
base-catalyzed chemical reactions)

IT 16424-35-4P, 2-Pentylidenecyclopentanone 25564-22-1P,
 2-Pentyl-2-cyclopenten-1-one 34084-81-6P,
 2-(3-Oxobutyl)cyclohexane-1,3-dione 42558-01-0P,
 2-(1-Hydroxypentyl)cyclopentanone 99178-63-9P,
 4-[2-[2-(Dimethylamino)ethoxy]ethyl]morpholine 898535-33-6P,
 N,N-Diisopropyl-N-[2-[2-(dimethylamino)ethoxy]ethyl]amine 898535-45-0P
 959467-54-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation of quaternary ammonium compds. as basic ionic liqs. in
 base-catalyzed chemical reactions)

IT 80-54-6P, β -Lilial 2169-69-9P, Ethyl
 (E)-2-benzylidene-2-cyanoacetate 5411-12-1P, Chalcone epoxide
 14533-87-0P, Ethyl (Z)-2-benzylidene-2-cyanoacetate 42576-97-6P
 100348-93-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of quaternary ammonium compds. as basic ionic liqs. in
 base-catalyzed chemical reactions)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
 (1) Anon; DE 10247578 A1 CAPLUS
 (2) Anon; US 20020035297 A1 CAPLUS
 (3) Anon; US 20040097755 A1 CAPLUS
 (4) Anon; WO 2004029004 A1 CAPLUS
 (5) Anon; WO 2005019185 A1 CAPLUS

L11 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2005:561949 CAPLUS
 DN 143:229956
 ED Entered STN: 30 Jun 2005

TI Synthesis and Characterization of Organometallic Ionic
 Liquids and a Heterometallic Carbene Complex Containing the
 Chromium Tricarbonyl Fragment

AU Moret, Marc-Etienne; Chaplin, Adrian B.; Lawrence, Adrien K.; Scopelliti,
 Rosario; Dyson, Paul J.

CS Institut des Sciences et Ingenierie Chimiques, EPFL-BCH, Lausanne,
 CH-1015, Switz.

SO Organometallics (2005), 24(16), 4039-4048
 CODEN: ORGND7; ISSN: 0276-7333

PB American Chemical Society
 DT Journal
 LA English

CC 29-11 (Organometallic and Organometalloidal Compounds)
 Section cross-reference(s): 75
 OS CASREACT 143:229956

AB Direct reaction between [Cr(CO)6] and arenes with ionic substituents
 affords the corresponding arene-Cr tricarbonyl complexes,
 [Cr(CO)3(arene)], in only modest (4-32%) yield. In contrast, these
 complexes can be prepared in pure form in excellent yield from the reaction
 of [Cr(CO)3(η^6 -C6H5CH2Br)] with, for example, N-methylimidazole. The
 structures of [Cr(CO)3(η^6 -C6H5CH2MIM)]Br (MIM = 3-methylimidazolium),
 [Cr(CO)3(η^6 -C6H5CH2MMIM)]Br (MMIM = 2,3-dimethylimidazolium), and
 [Cr(CO)3(η^6 -C6H5CH2NMe2Me2OH)]Br were established by x-ray diffraction
 anal. Subsequent exchange of the bromide anion for Tf2N- affords new
 organometallic salts with m.ps. <70°. Reaction of the bromide
 salts includes tosylation of [Cr(CO)3(η^6 -C6H5CH2NMe2Me2OH)]Br to
 afford [Cr(CO)3(η^6 -C6H5CH2NMe2(CH2)2OTs)]Br and the formation of the
 heterometallic carbene complex [Ru(η^6 -p-cymene)Cl2{C4H5N2CH2Ph- η^6 -
 Cr(CO)3}]. Both compds. were characterized in the solid state by x-ray
 diffraction.

ST chromium tricarbonyl derivatized ionic liq prepn; benzylimidazolium
 chromium tricarbonyl deriv prepn structure reaction; ruthenium chromium

heterometallic carbene benzyliimidazole deriv prepn structure; crystal structure chromium tricarbonyl benzyliimidazolium heterometallic ruthenium benzyliimidazole carbene; mol structure chromium tricarbonyl benzyliimidazolium heterometallic ruthenium benzyliimidazole carbene

IT Crystal structure
Molecular structure
(of chromium tricarbonyl benzyliimidazolium organometallic ionic liqs. and chromium-ruthenium heterometallic benzyliimidazole carbene complex)

IT Ionic liquids
(organometallic; preparation and structure of chromium tricarbonyl benzyliimidazolium-containing ionic liqs. and of chromium-ruthenium heterometallic benzyliimidazole carbene complex)

IT Aromatic hydrocarbons, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and structure of chromium tricarbonyl benzyliimidazolium-containing ionic liqs. and of chromium-ruthenium heterometallic benzyliimidazole carbene complex)

IT 862999-66-4P 862999-67-5P 862999-68-6P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(crystal structure; preparation and structure of chromium tricarbonyl benzyliimidazolium-containing ionic liqs. and of chromium-ruthenium heterometallic benzyliimidazole carbene complex)

IT 862999-72-2P 862999-74-4P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(crystal structure; preparation and structure of chromium tricarbonyl benzyliimidazolium-containing ionic liqs. and of chromium-ruthenium heterometallic benzyliimidazole carbene complex)

IT 108-01-0, 2-(Dimethylamino)ethanol 616-47-7, N-Methylimidazole 637-59-2 1739-84-0, 1,2-Dimethylimidazole 7221-41-2 13007-92-6, Chromium hexacarbonyl 52462-29-0 65039-11-4 191352-85-9 862999-80-2 862999-81-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and structure of chromium tricarbonyl benzyliimidazolium-containing ionic liqs. and of chromium-ruthenium heterometallic benzyliimidazole carbene complex)

IT 500996-04-3P 862999-75-5P 862999-76-6P 862999-77-7P 862999-78-8P 862999-79-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and structure of chromium tricarbonyl benzyliimidazolium-containing ionic liqs. and of chromium-ruthenium heterometallic benzyliimidazole carbene complex)

IT 862999-57-3P 862999-59-5P 862999-61-9P 862999-63-1P 862999-65-3P 862999-69-7P 862999-70-0P 862999-71-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and structure of chromium tricarbonyl benzyliimidazolium-containing ionic liqs. and of chromium-ruthenium heterometallic benzyliimidazole carbene complex)

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L11 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:753469 CAPLUS

DN 141:280342

ED Entered STN: 16 Sep 2004

TI Polymer particle dispersions, electrolytes and quasi-solid electrolytes comprising same dispersions, and batteries employing same quasi-solid electrolytes

IN Nagano, Toshiaki; Ogawa, Tetsuo

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08F002-12

ICS C08F012-00; C08F020-00; H01B001-06; H01M008-02; H01M010-40;

H01M014-00

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

Section cross-reference(s): 38, 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004256711	A	20040916	JP 2003-50180	20030227
PRAI	JP 2003-50180		20030227		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2004256711	ICM	C08F002-12
	ICS	C08F012-00; C08F020-00; H01B001-06; H01M008-02; H01M010-40; H01M014-00
	IPCI	C08F0002-12 [ICM,7]; C08F0012-00 [ICS,7]; C08F0020-00 [ICS,7]; H01B0001-06 [ICS,7]; H01M0008-02 [ICS,7]; H01M0010-40 [ICS,7]; H01M0014-00 [ICS,7]
	IPCR	C08F0002-12 [I,A]; C08F0002-12 [I,C*]; C08F0012-00 [I,A]; C08F0012-00 [I,C*]; C08F0020-00 [I,A]; C08F0020-00 [I,C*]; H01B0001-06 [N,A]; H01B0001-06 [N,C*]; H01M0008-02 [N,A]; H01M0008-02 [N,C*]; H01M0010-36 [N,C*]; H01M0010-40 [N,A]; H01M0014-00 [N,A]; H01M0014-00 [N,C*]
	FTERM	4J011/AA05; 4J011/KA01; 4J011/KA15; 4J011/KB08; 4J011/KB19; 4J011/KB28; 4J011/KB29; 4J011/KB30; 5G301/CA30; 5G301/CD01; 5H026/AA06; 5H026/HH01; 5H026/HH05; 5H026/HH06; 5H029/AJ06; 5H029/AM16; 5H029/DJ09; 5H029/HJ01; 5H029/HJ05; 5H029/HJ20; 5H032/AA06; 5H032/AS16; 5H032/EE01; 5H032/EE07; 5H032/EE16; 5H032/HH01; 5H032/HH04; 5H032/HH08

AB Polymer particle dispersions comprise ionic liqs. as disperse media. Also claimed are electrolytes with elec. conductivity between (1 + 10⁻⁹) and (1

+ 107) S/cm. The (quasi-solid) electrolytes are suitable for dye-sensitized solar cells, secondary lithium batteries, and fuel cells.

ST polymer particle dispersion ionic liq medium; electrolyte polymer particle dispersion ionic liq; quasi solid electrolyte polymer particle dispersion ionic liq; lithium battery quasi solid electrolyte ionic liq disperse medium; dye sensitized battery quasi solid electrolyte ionic liq dispersion

IT Secondary batteries
(lithium; polymer particle dispersions containing ionic liquid disperse media, for (quasi-solid) electrolytes and batteries)

IT Electrolytes
Ionic liquids
(polymer particle dispersions containing ionic liquid disperse media, for (quasi-solid) electrolytes and batteries)

IT Solar cells
(quasi-solid electrolytes; polymer particle dispersions containing ionic liquid disperse media, for (quasi-solid) electrolytes and batteries)

IT Battery electrolytes
(quasi-solid; polymer particle dispersions containing ionic liquid disperse media, for (quasi-solid) electrolytes and batteries)

IT 64-19-7DP, Acetic acid, reaction products with cresol novolak epoxy resins and amines, polymer with acrylic monomers 100-42-5DP, Styrene, polymers with cresol novolak epoxy resins quaternary ammonium salts, polymer with acrylic monomers 108-01-0DP, N,N-Dimethylaminoethanol, reaction products with cresol novolak epoxy resins and acetic acid, polymer with acrylic monomers 6606-59-3DP, 1,6-Hexanediol dimethacrylate, polymers with cresol novolak epoxy resins quaternary ammonium salts, polymer with acrylic monomers 78949-77-6P, 1,6-Hexanediol dimethacrylate-styrene copolymer 181140-08-9DP, ESCN 195 acrylate, reaction products with amines and acetic acid, polymer with acrylic monomers 757973-29-8P 757973-30-1P 757973-31-2P
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(crosslinked, particles; polymer particle dispersions containing ionic liquid disperse media, for (quasi-solid) electrolytes and batteries)

IT 35935-34-3, 1-Methyl-3-ethylimidazolium iodide
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(ionic liqs.; polymer particle dispersions containing ionic liquid disperse media, for (quasi-solid) electrolytes and batteries)

L11 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2004:56092 CAPLUS
DN 140:270820
ED Entered STN: 23 Jan 2004
TI Triazine-Based Polyfluorinated Triquaternary Liquid Salts: Synthesis, Characterization, and Application as Solvents in Rhodium(I)-Catalyzed Hydroformylation of 1-Octene
AU Omotowa, Bamidele A.; Shreeve, Jean'ne M.
CS Department of Chemistry, University of Idaho, Moscow, ID, 83844-2343, USA
SO Organometallics (2004), 23(4), 783-791
CODEN: ORGN7; ISSN: 0276-7333
PB American Chemical Society
DT Journal
LA English
CC 28-19 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 23, 67
OS CASREACT 140:270820
AB Silylation of N-(2-hydroxyethyl)imidazole, HOCH2CH2Im (1), with hexamethyldisilazane gave N-(2-trimethylsilyloxyethyl)imidazole, Me3SiOCH2CH2Im (2), which underwent quaternization reactions with the

alkyl halides and gave three new N-(trimethylsilyloxyethyl) imidazolium halides, Me₃SiOCH₂CH₂Im+RX-, where Im+ = imidazolium and R/X = Me/I (3), CH₂CH₂F/Br (4), and CH₂CH₂CF₃/I (5). The Et ether, formed from 1 and Et bromide was quaternized with CF₃CH₂CH₂I followed by anion exchange with LiN(SO₂CF₃)₂ to obtain [CF₃CH₂CH₂Im+CH₂CH₂OEt N(SO₂CF₃)₂-] (8). The metathesis reactions of 3-5 with cyanuric fluoride in acetonitrile at 25° gave tris[2-(N'-alkylimidazolium)ethoxy]triazine trihalides, N₃C₃(OCH₂CH₂Im+RX-)₃, where R/X = Me/I (9), CH₂CH₂F/Br (10), and CH₂CH₂CF₃/I (11). Two neutral trimeric compds., N₃C₃(OCH₂CH₂Im)₃ (12) and N₃C₃(OCH₂CH₂NMe₂)₃ (14), were prepared from reactions of cyanuric fluoride and Me₃SiOCH₂CH₂NMe₂ or 2, resp. The quaternization of 12 with MeI gave tris[oxoethyl(trimethyl)ammonium]triazine, N₃C₃(OCH₂CH₂N+MeI-)₃ (14). Subsequent exchange of the halides in 9-11 and N₃C₃(OCH₂CH₂N+MeI-)₃ (15) with the weakly coordinating anions of AgOSO₂CF₃, LiN(SO₂CF₃)₂, AgNO₃, or AgClO₄ resulted in new triquaternary salts that were characterized by NMR, elemental analyses, and, for some of the compds., mass spectroscopy. Phys. (m.p. and d.) and thermal properties of compds. prepared were determined with differential scanning calorimeter (DSC) and thermogravimetric analyzer (TGA). In Rh(I)-catalyzed hydroformylation of 1-octene, with Ph₂P(NMPBTA) [NMPBTA = N-methylpyridinium bis(trifluoromethanesulfonyl)amide] as ligand, the turnover frequency (TOF), conversion, isomer selectivity (n/i), and recyclability were compared when triquaternary salts or monoquaternary were used as solvents in the biphasic hydroformylation process. A change of metal/ligand ratio resulted in significant increase of n/i selectivity, but was marginal with 8 as solvent.

- ST triazine polyfluorinated triquaternary liq salt prepn solvent; rhodium catalyzed hydroformylation octene polyfluorinated triazine triquaternary liq solvent; thermogravimetric thermal property polyfluorinated triazine triquaternary liq salt solvent
- IT Solvents
(ionic liqs.; synthesis, characterization, and application of triazine-based polyfluorinated triquaternary liquid salts as solvents in rhodium-catalyzed hydroformylation of octene)
- IT Quaternary ammonium compounds, preparation
RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(solvents; synthesis, characterization, and application of triazine-based polyfluorinated triquaternary liquid salts as solvents in rhodium-catalyzed hydroformylation of octene)
- IT Differential scanning calorimetry
Hydroformylation catalysts
Ionic liquids
Thermal properties
Thermogravimetric analysis
(synthesis, characterization, and application of triazine-based polyfluorinated triquaternary liquid salts as solvents in rhodium-catalyzed hydroformylation of octene)
- IT 673686-75-4P 673687-58-6P 673687-65-5P
RL: NUU (Other use, unclassified); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(solvent, thermal properties; synthesis, characterization, and application of triazine-based polyfluorinated triquaternary liquid salts as solvents in rhodium-catalyzed hydroformylation of octene)
- IT 14874-82-9, (Acetylacetonato)dicarbonylrhodium
RL: CAT (Catalyst use); USES (Uses)
(synthesis, characterization, and application of triazine-based polyfluorinated triquaternary liquid salts as solvents in rhodium-catalyzed hydroformylation of octene)
- IT 673687-18-8P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)
 (synthesis, characterization, and application of triazine-based
 polyfluorinated triquaternary liquid salts as solvents in
 rhodium-catalyzed hydroformylation of octene)

IT 107-07-3, 2-Chloroethanol, reactions 108-01-0, 2-N,N-
 Dimethylaminoethanol 111-66-0, 1-Octene 288-32-4, Imidazole,
 reactions 460-37-7, 3,3,3-Trifluoropropyl iodide 675-14-9, Cyanuric
 fluoride 762-49-2, 1-Bromo-2-fluoroethane 1079-66-9,
 Chlorodiphenylphosphine 3430-13-5, 5-Bromo-2-methylpyridine
 90076-65-6, Lithium bis(trifluoromethylsulfonyl)amide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (synthesis, characterization, and application of triazine-based
 polyfluorinated triquaternary liquid salts as solvents in
 rhodium-catalyzed hydroformylation of octene)

IT 1615-14-1P, 1-(2-Hydroxyethyl)imidazole 16654-64-1P 132682-77-0P
 197712-86-0P 673686-35-6P 673686-67-4P 673687-75-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (synthesis, characterization, and application of triazine-based
 polyfluorinated triquaternary liquid salts as solvents in
 rhodium-catalyzed hydroformylation of octene)

IT 124-19-6P, Nonanal 7786-29-0P, 2-Methyloctanal
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (synthesis, characterization, and application of triazine-based
 polyfluorinated triquaternary liquid salts as solvents in
 rhodium-catalyzed hydroformylation of octene)

IT 673687-83-7P
 RL: CAT (Catalyst use); RCT (Reactant); SPN (Synthetic preparation); PREP
 (Preparation); RACT (Reactant or reagent); USES (Uses)
 (thermal properties; synthesis, characterization, and application of
 triazine-based polyfluorinated triquaternary liquid salts as solvents in
 rhodium-catalyzed hydroformylation of octene)

IT 132684-26-5P 673686-41-4P 673686-48-1P 673686-55-0P 673686-81-2P
 673686-87-8P 673686-90-3P 673686-95-8P 673687-12-2P 673687-24-6P
 673687-32-6P 673687-39-3P 673687-46-2P 673687-50-8P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP
 (Preparation); RACT (Reactant or reagent)
 (thermal properties; synthesis, characterization, and application of
 triazine-based polyfluorinated triquaternary liquid salts as solvents in
 rhodium-catalyzed hydroformylation of octene)

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=> e walker adam john/au

E1	2	WALKER ADAM G/AU
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E3	6 -->	WALKER ADAM JOHN/AU
E4	2	WALKER ADAM K/AU
E5	1	WALKER ADRIAN/AU
E6	3	WALKER ADRIAN B/AU
E7	1	WALKER ADRIAN LESLIE/AU
E8	23	WALKER ADRIAN M/AU
E9	4	WALKER ADRIAN WILLIAM/AU
E10	1	WALKER ADRIANNE/AU
E11	2	WALKER ADRIANNE R/AU
E12	1	WALKER ADRIEN LESLIE/AU

=> s e2 or e3

	6	"WALKER ADAM J"/AU
	6	"WALKER ADAM JOHN"/AU
L12	12	"WALKER ADAM J"/AU OR "WALKER ADAM JOHN"/AU

=> s l12 and ionic

304581 IONIC

L13 12 L12 AND IONIC

=> d 1-12 all

L13 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2007:619447 CAPLUS

DN 147:33228

ED Entered STN: 08 Jun 2007

TI Use of hydroxylammonium salts as ionic liquid solvents for enzyme-catalyzed reactions

IN Walker, Adam John

PA Bionigs Limited, UK

SO PCT Int. Appl., 38pp.

CODEN: PIXXD2

DT Patent

LA English

CC 45-5 (Industrial Organic Chemicals, Leather, Fats, and Waxes)

Section cross-reference(s): 23

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007063327	A1	20070607	WO 2006-GB4503	20061204
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
GB 2437726	A	20071107	GB 2006-24157	20061204
PRAI GB 2005-24700	A	20051203		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2007063327	IPCI	C07C0239-10 [I,A]; C07C0239-12 [I,A]; C07C0239-00 [I,C*]; C07C0211-64 [I,A]; C07C0211-00 [I,C*]; C07C0239-00 [I,C]; C07C0239-10 [I,A]; C07C0211-00 [I,C]; C07C0211-64 [I,A]; C07C0239-12 [I,A]
	ECLA	C07C239/10; C07C239/12
GB 2437726	IPCI	C07C0239-10 [I,A]; C07C0059-06 [I,A]; C07C0059-00 [I,C*]; C07C0239-12 [I,A]; C07C0239-00 [I,C*]; C07C0311-49 [I,A]; C07C0311-00 [I,C*]; C12P0001-00 [I,A]; C12P0007-62 [I,A]
	IPCR	C07C0239-00 [I,C]; C07C0239-10 [I,A]; C07C0059-00 [I,C]; C07C0059-06 [I,A]; C07C0239-12 [I,A]; C07C0311-00 [I,C]; C07C0311-49 [I,A]; C12P0001-00 [I,C]; C12P0001-00 [I,A]; C12P0007-62 [I,C]; C12P0007-62 [I,A]
	ECLA	C07C239/10; C07C239/12

OS MARPAT 147:33228

AB An ionic liquid comprises cations of the formula R1R2R3N+-OR4, where R1, R2, R3 and R4 are each independently selected from hydrogen and hydrocarbyl, the ionic liquid containing ≤ 1% of water. The ionic liqs. may be used as solvents for chemical or biochem. reactions, in particular, for enzyme-catalyzed reactions. Thus, N,N-diethylhydroxylammonium acetate (m.p. < -20°, viscosity 12 cP

at 25°, refractive index 1.414) was prepared by dissolving N,N-diethylhydroxylamine (90) and acetic acid (60.06 g) sep. in ethanol (250 mL each), and adding the acid solution dropwise to the amine solution over 1 h, while cooling with ice and stirring.

ST hydroxylammonium salt ionic liq solvent enzyme catalyzed reaction

IT Solvents
(organic; use of hydroxylammonium salts as ionic liquid solvents for enzyme-catalyzed reactions)

IT Ionic liquids
(use of hydroxylammonium salts as ionic liquid solvents for enzyme-catalyzed reactions)

IT Enzymes, uses
RL: CAT (Catalyst use); USES (Uses)
(use of hydroxylammonium salts as ionic liquid solvents for enzyme-catalyzed reactions)

IT Quaternary ammonium compounds, preparation
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)
(use of hydroxylammonium salts as ionic liquid solvents for enzyme-catalyzed reactions)

IT 39004-71-2P, N,N-Diethylhydroxylammonium acetate 939384-89-1P
939384-90-4P 939384-91-5P 939384-93-7P 939384-94-8P 939384-96-0P
939384-97-1P
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)
(use of hydroxylammonium salts as ionic liquid solvents for enzyme-catalyzed reactions)

IT 939384-92-6P
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(use of hydroxylammonium salts as ionic liquid solvents for enzyme-catalyzed reactions)

IT 64-19-7, Acetic acid, reactions 75-75-2, Methanesulfonic acid 79-14-1, Glycolic acid, reactions 108-01-0, N,N-Dimethylethanolamine 121-44-8, Triethylamine, reactions 127-09-3, Sodium acetate 1493-13-6, Triflic acid 3710-84-7, N,N-Diethylhydroxylamine 7647-01-0, Hydrochloric acid, reactions 7722-84-1, Hydrogen peroxide, reactions 82113-65-3, Bis(trifluoromethylsulfonyl)imide
RL: RCT (Reactant); RACT (Reactant or reagent)
(use of hydroxylammonium salts as ionic liquid solvents for enzyme-catalyzed reactions)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Anon
- (2) Anon
- (3) Anon
- (4) Anon
- (5) Anon
- (6) Anon
- (7) Anon
- (8) Anon; GAZZ CHIM ITAL 1954, V84, P915
- (9) Anon; J AM CHEM SOC 1927, V49, P1539
- (10) Anon; J AM CHEM SOC 1947, V69, P1731
- (11) Anon; J CHIN CHEM SOC 1977, V24, P115
- (12) Anon; J MOL STRUCT 1990, V239, P1
- (13) Anon; JUSTUS LIEBIGS ANN CHEM 1913, V397, P275
- (14) Anon; YAKUGAKU ZASSHI 1940, V60, P24
- (15) Hecht Stacie E; US 2006094616 A1 2006
- (16) Nippon Telegraph & Telephone; JP 2005149982 A 2005 CAPLUS
- (17) Takami, N; JP 11086905 A 1999 CAPLUS
- (18) Umemoto Teruo; US 2006094882 A1 2006

(19) Wehner Wolfgang; US 4578489 A 1986 CAPLUS

L13 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2007:371437 CAPLUS

DN 146:379587

ED Entered STN: 04 Apr 2007

TI Primary, secondary and tertiary ammonium salts as ionic liquids

IN Walker, Adam John

PA Bionigs Limited, UK

SO Brit. UK Pat. Appl., 51pp.

CODEN: BAXXDU

DT Patent

LA English

CC 23-4 (Aliphatic Compounds)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2430675	A	20070404	GB 2006-19130	20060928
	WO 2007036712	A1	20070405	WO 2006-GB3586	20060928
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	GB 2444614	A	20080611	GB 2007-23469	20060928
	EP 1948589	A1	20080730	EP 2006-779557	20060928
	R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, RS			
	JP 2009510038	T	20090312	JP 2008-532863	20060928
	IN 2008KN01698	A	20081226	IN 2008-KN1698	20080428
	US 20080221361	A1	20080911	US 2008-88509	20080502
	CN 101316810	A	20081203	CN 2006-80044643	20080529
PRAI	GB 2005-19898	A	20050930		
	GB 2006-19130	A3	20060928		
	WO 2006-GB3586	W	20060928		
CLASS	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES		
	GB 2430675	IPCI	C07C0217-08 [I,A]; C07C0217-00 [I,C*]; C07C0213-08 [I,A]; C07C0213-00 [I,C*]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0215-00 [I,C*]		
		IPCR	C07C0217-00 [I,C]; C07C0217-08 [I,A]; B01J0031-00 [I,C*]; B01J0031-00 [I,A]; B01J0031-02 [I,C*]; B01J0031-02 [I,A]; C07C0213-00 [I,C]; C07C0213-08 [I,A]; C07C0215-00 [I,C]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0215-40 [I,A]; C07C0217-28 [I,A]; C07C215/40; B01J031/00E; B01J031/02G2; C07C217/08; C07C217/28		
	WO 2007036712	IPCI	C07C0217-08 [I,A]; C07C0217-28 [I,A]; C07C0217-00 [I,C*]; B01J0031-02 [I,A]		
		IPCR	C07C0217-00 [I,C]; C07C0217-08 [I,A]; B01J0031-00 [I,C*]; B01J0031-00 [I,A]; B01J0031-02 [I,C]; B01J0031-02 [I,A]; C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0217-28 [I,A]		

	ECLA	C07C215/40; B01J031/00E; B01J031/02G2; C07C217/08; C07C217/28
GB 2444614	IPCI	C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0215-40 [I,A]; C07C0215-00 [I,C*]; C07C0217-08 [I,A]; C07C0217-00 [I,C*]
	IPCR	C07C0215-00 [I,C]; C07C0215-08 [I,A]; B01J0031-00 [I,C*]; B01J0031-00 [I,A]; B01J0031-02 [I,C*]; B01J0031-02 [I,A]; C07C0215-12 [I,A]; C07C0215-40 [I,A]; C07C0217-00 [I,C]; C07C0217-08 [I,A]; C07C0217-28 [I,A]
EP 1948589	IPCI	C07C0217-08 [I,A]; C07C0217-28 [I,A]; C07C0217-00 [I,C*]; B01J0031-02 [I,A]
JP 2009510038	IPCI	C07C0217-08 [I,A]; C07C0217-00 [I,C*]
	FTERM	4H006/AA01; 4H006/AB81; 4H006/BN10; 4H006/BP10; 4H006/BU50
IN 2008KN01698	IPCI	C07C0217-08 [ICM,7]; C07C0217-00 [ICM,7,C*]
US 20080221361	IPCI	C07C0217-08 [I,A]; C07C0217-28 [I,A]; C07C0217-00 [I,C*]
	NCL	564/508.000; 564/503.000
CN 101316810	IPCI	C07C0217-08 [I,A]; C07C0217-28 [I,A]; C07C0217-00 [I,C*]; B01J0031-02 [I,A]
OS	MARPAT 146:379587	
AB	The invention provides ionic liqs. and processes for their preparation. The liqs. comprise a cation of the formula N+HR1R2R3. Ammonium salts of formula N+HR1R2R3: wherein R1 is (un)substituted hydrocarbyl-oxy-hydrocarbyl; R2 and R3 is H and hydrocarbyl; R2R3 taken together with the N to form a heterocyclic group; are claimed. In each instance hydrocarbyl should be understood as any group containing carbon and hydrogen, which may also contain one or more heteroatoms. Preferred anions include halides, halogenated inorg. or organic anions, nitrates, sulfates, phosphates, carboxylates, sulfonates and carbonates. These ionic liqs. may be useful as solvents for chemical or bio-chemical, particularly enzyme-catalyzed, reactions.	
ST	amine carboxylic acid salt formation; ammonium salt prepn ionic liq	
IT	Ionic liquids (preparation of primary, secondary and tertiary ammonium salts as ionic liqs.)	
IT	Quaternary ammonium compounds, preparation RL: NUU (Other use, unclassified); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses) (preparation of primary, secondary and tertiary ammonium salts as ionic liqs.)	
IT	13695-28-8P	13695-29-9P 68052-35-7P 162783-72-4P 205490-68-2P
	523978-47-4P	932394-08-6P 932394-09-7P 932394-10-0P 932394-11-1P
	932394-12-2P	932394-13-3P 932394-14-4P 932394-15-5P 932394-16-6P
	932394-17-7P	932394-18-8P 932394-19-9P 932394-20-2P 932394-21-3P
	932394-22-4P	932394-23-5P 932394-24-6P 932394-25-7P 932394-26-8P
	932394-27-9P	932394-28-0P 932394-29-1P 932394-30-4P 932394-31-5P
	932394-32-6P	
	RL: NUU (Other use, unclassified); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses) (preparation of primary, secondary and tertiary ammonium salts as ionic liqs.)	
IT	79-09-4, Propanoic acid, reactions	79-14-1, Glycolic acid, reactions
	100-37-8, N,N-Diethylethanolamine	111-75-1, N-Butylethanolamine
	124-07-2, Octanoic acid, reactions	621-56-7, 1-(Diethylamino)propan-2,3-diol
	1704-62-7, N,N-Dimethyl-1-[2-(2-hydroxyethoxy)ethyl]amine	3030-44-2, N,N-Dimethyl-2-methoxyethylamine
	3179-63-3, N,N-Dimethylpropanolamine	5332-73-0, 3-Methoxypropylamine
	16369-21-4, N-Propylethanolamine	92260-33-8, N-Methyl-bis-(2-methoxyethyl)amine

RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of primary, secondary and tertiary ammonium salts as
ionic liqs.)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Anon; US 20030149264 A CAPLUS

(2) Anon; WO 2004114445 A CAPLUS

(3) Anon; GB 2412912 A CAPLUS

(4) Anon; US 4377654 A CAPLUS

L13 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:343657 CAPLUS

DN 144:390206

ED Entered STN: 14 Apr 2006

TI Use of ionic liquids as media for catalyzed reactions

IN Walker, Adam John; Gimpel, Erik Richard; Rosser, Susan Jane

PA Cambridge University Technical Services Limited, UK

SO PCT Int. Appl., 40 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM B01J031-02

ICS B01J019-00

CC 21-3 (General Organic Chemistry)

Section cross-reference(s): 7, 9, 63, 67

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006038013	A2	20060413	WO 2005-GB3848	20051006
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	GB 2420344	A	20060524	GB 2005-20313	20051006
	EP 1804969	A2	20070711	EP 2005-788999	20051006
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU				
	JP 2008515619	T	20080515	JP 2007-535237	20051006
	US 20080191170	A1	20080814	US 2007-576822	20071116
PRAI	GB 2004-22447	A	20041008		
	WO 2005-GB3848	W	20051006		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2006038013	ICM	B01J031-02
	ICS	B01J019-00
	IPCI	B01J0031-02 [ICM,7]; B01J0019-00 [ICS,7]
	IPCR	B01J0031-00 [I,C*]; B01J0031-00 [I,A]; B01J0031-02 [I,C*]; B01J0031-02 [I,A]; B01J0039-00 [I,C*]; B01J0039-04 [I,A]; B01J0041-00 [I,C*]; B01J0041-04 [I,A]; C07B0061-00 [I,C*]; C07B0061-00 [I,A]; C12N0009-04 [I,C*]; C12N0009-04 [I,A]
	ECLA	B01J039/04; B01J031/00E; B01J031/02G2; B01J031/02G4D;

GB 2420344	IPCI	B01J041/04; C07B061/00; C12N009/04; L01J C07D0233-54 [I,A]; C07D0233-00 [I,C*]; C07C0213-00 [I,A]; C07C0213-08 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0215-00 [I,C*]; C12P0017-18 [I,A]
	IPCR	C07D0233-00 [I,C]; C07D0233-54 [I,A]; B01J0031-00 [I,C*]; B01J0031-00 [I,A]; B01J0031-02 [I,C*]; B01J0031-02 [I,A]; B01J0039-00 [I,C*]; B01J0039-04 [I,A]; B01J0041-00 [I,C*]; B01J0041-04 [I,A]; C07B0061-00 [I,C*]; C07B0061-00 [I,A]; C07C0213-00 [I,C]; C07C0213-00 [I,A]; C07C0213-08 [I,A]; C07C0215-00 [I,C]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C12N0009-04 [I,C*]; C12N0009-04 [I,A]; C12P0017-18 [I,C]; C12P0017-18 [I,A]
	ECLA	B01J039/04; B01J031/00E; B01J031/02G2; B01J031/02G4D; B01J041/04; C07B061/00; C12N009/04; L01J
EP 1804969	IPCI	B01J0031-02 [I,A]; B01J0019-00 [I,A]
	IPCR	B01J0031-02 [I,C]; B01J0031-02 [I,A]; B01J0019-00 [I,C]; B01J0019-00 [I,A]; B01J0031-00 [I,C*]; B01J0031-00 [I,A]; B01J0039-00 [I,C*]; B01J0039-04 [I,A]; B01J0041-00 [I,C*]; B01J0041-04 [I,A]; C07B0061-00 [I,C*]; C07B0061-00 [I,A]; C12N0009-04 [I,C*]; C12N0009-04 [I,A]
	ECLA	B01J039/04; B01J031/00E; B01J031/02G2; B01J031/02G4D; B01J041/04; C07B061/00; C12N009/04; L01J
JP 2008515619	IPCI	B01J0019-00 [I,A]; C07C0215-40 [N,A]; C07C0215-00 [N,C*]; C07C0053-08 [N,A]; C07C0053-18 [N,A]; C07C0053-00 [N,C*]
	IPCR	B01J0019-00 [I,C]; B01J0019-00 [I,A]; B01J0031-00 [I,C*]; B01J0031-00 [I,A]; B01J0031-02 [I,C*]; B01J0031-02 [I,A]; B01J0039-00 [I,C*]; B01J0039-04 [I,A]; B01J0041-00 [I,C*]; B01J0041-04 [I,A]; C07B0061-00 [I,C*]; C07B0061-00 [I,A]; C07C0053-00 [N,C]; C07C0053-08 [N,A]; C07C0053-18 [N,A]; C07C0215-00 [N,C]; C07C0215-40 [N,A]; C12N0009-04 [I,C*]; C12N0009-04 [I,A]
	FTERM	4G075/AA13; 4G075/BA10; 4G075/BB03; 4G075/CA51; 4G075/CA54; 4G075/CA55; 4G075/DA18; 4H006/AA03; 4H006/AB99; 4H006/BM10; 4H006/BM71; 4H006/BN10; 4H006/BU32
US 20080191170	IPCI	B01F0001-00 [I,A]
	NCL	252/364.000
AB	A method of using an ionic liquid involves in the order specified, providing an ionic liquid having a first chemical form, using the first chemical form ionic liquid for a first predetd. purpose, chemical modifying the first chemical form ionic liquid so as to change it to a second chemical form, and using the second chemical ionic liquid for a second determined purpose. Thus, 3-hydroxypropylmethylimidazolium hexafluorophosphate was converted to the trimethylsilyl compound which could be deprotected to back to the hexafluorophosphate compound	
ST	ionic liq carrier medium catalyzed reaction prepn	
IT	Bases, uses	
	RL: NUU (Other use, unclassified); USES (Uses) (Bronsted bases; use of ionic liqs. as media for catalyzed reactions)	
IT	Basicity	
	(Lewis; use of ionic liqs. as media for catalyzed reactions)	
IT	Solvation	
	(affinity; use of ionic liqs. as media for catalyzed reactions)	
IT	Heat capacity	
	(specific; use of ionic liqs. as media for catalyzed	

reactions)

IT Bronsted acidity
 Chirality
 Dielectric constant
 Dissociation constant
 Electric conductivity
 Electric conductors
 Electric insulators
 Electromagnetism
 Electron acceptors
 Electron donors
 Electrophoresis
 Freezing point
 Hydrogen bond
 Interfacial tension
 Ion exchangers
 Ionic liquids
 Lewis acidity
 Melting point
 Polarity
 Reaction kinetics
 Reactivity (chemical)
 Redox potential
 Refractive index
 Sensors
 Solvents
 Thermal conductivity
 Thermal conductors
 Thermal insulators
 Viscosity
 (use of ionic liqs. as media for catalyzed reactions)

IT 97002-71-6, Morphine dehydrogenase
 RL: BSU (Biological study, unclassified); CAT (Catalyst use); BIOL
 (Biological study); USES (Uses)
 (use of ionic liqs. as media for catalyzed reactions)

IT 670222-24-9 823179-37-9
 RL: NUU (Other use, unclassified); USES (Uses)
 (use of ionic liqs. as media for catalyzed reactions)

IT 444724-05-4P
 RL: NUU (Other use, unclassified); RCT (Reactant); SPN (Synthetic
 preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (use of ionic liqs. as media for catalyzed reactions)

IT 721942-97-8P 866568-18-5P 866569-32-6P
 RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP
 (Preparation); USES (Uses)
 (use of ionic liqs. as media for catalyzed reactions)

IT 69-57-8, Penicillin G sodium
 RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES
 (Uses)
 (use of ionic liqs. as media for catalyzed reactions)

IT 3724-65-0, Crotonic acid 355011-34-6 866568-01-6 866568-90-3
 866569-40-6
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (use of ionic liqs. as media for catalyzed reactions)

IT 882848-41-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (use of ionic liqs. as media for catalyzed reactions)

L13 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2009 ACS ON STN
 AN 2006:247293 CAPLUS
 ED Entered STN: 17 Mar 2006

TI Task-specific ionic liquids for biomolecular applications
AU Walker, Adam J.; Bruce, Neil C.
CS Bionigs, York, YO10 5DG, UK
SO Abstracts of Papers, 231st ACS National Meeting, Atlanta, GA, United States, March 26-30, 2006 (2006), IEC-282 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69HYEC
DT Conference; Meeting Abstract; (computer optical disk)
LA English
AB Ionic liqs. have attracted considerable recent attention as "designer solvents", due to the large number of potential low-melting anion/cation combinations and the significant differences in phys. and chemical properties between them. To date, however, most research involving ionic liqs. has utilized a limited range of these compds. originally devised for electrochem. applications and little effort has been made to tailor the solvent design process towards the particular requirements of other industrially relevant processes. Based upon our studies into the interactions between ionic liqs. and biol. mols., we have developed new classes of ionic liqs. specifically optimized as solvents for biochem. processes, including enzyme catalysis, protein stabilization and assay techniques. These materials also offer advantages over conventional ionic liqs. in terms of safety, biodegradability, viscosity and cost.

L13 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2006:247128 CAPLUS
ED Entered STN: 17 Mar 2006
TI Redox biocatalysis in ionic liquids
AU Stubley, Heather C.; Walker, Adam J.; Bruce, Neil C.
CS Department of Biology, University of York, York, YO10 3LR, UK
SO Abstracts of Papers, 231st ACS National Meeting, Atlanta, GA, United States, March 26-30, 2006 (2006), IEC-117 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69HYEC
DT Conference; Meeting Abstract; (computer optical disk)
LA English
AB Enzymes are remarkable catalysts, ideal for organic synthesis. In vivo enzymic reactions occur in water, but problems arise due to poor substrate solubility and proteolysis. Studying enzymes in non-aqueous systems provides novel information about enzyme reactions and allow impossible or marginal reactions to occur. Studies in organic solvents show enzymes can be active in non-aqueous solvents. Ionic liqs. have great potential for enzyme catalysis, they are powerful solvents that are liquid at room temperature and composed only of ions. They lack vapor pressure, are generally polar with varying phys. properties. Their characteristics arise through the asym. interaction of the cation and anion. They can be tailored by altering the ion composition, allowing the solvent to be designed around an enzyme. This study focuses on activity and stability of alc. dehydrogenase (ADH) in ionic liqs., structure of ADH in ionic liqs. and effect of water content upon enzyme structure and activity.

L13 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2006:247126 CAPLUS
ED Entered STN: 17 Mar 2006
TI Effects of anion and cation selection on the physical properties of ammonium based ionic liquids
AU Gimpel, Erik R.; Walker, Adam J.
CS Research, Bionigs Ltd, York, YO10 5DG, UK
SO Abstracts of Papers, 231st ACS National Meeting, Atlanta, GA, United

States, March 26-30, 2006 (2006), IEC-115 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69HYEC

DT Conference; Meeting Abstract; (computer optical disk)

LA English

AB Ionic liqs. exhibit numerous interesting properties, notably they are non-volatile, non-flammable and can dissolve extremely high concns. of a wide variety of materials. Conventional ionic liqs., however, suffer from disadvantages such as cost, high viscosity and are often hazardous to both workers and the environment. We present new solvents which are cheap, readily prepared and purified, biodegradable (>98% in 48 h) and exhibit low viscosities (10-50 mPa.s). These solvents may be tailored for specific tasks including targeted solubilisation, purification or removal of particular materials or the performance of enzyme-catalyzed reactions. Selection of the appropriate ions enables the fine tuning of properties, including viscosity and solubility where a single bond alter these values by over an order of magnitude. Significant changes can be achieved by interchanging functional groups; process relevant properties that can be adjusted include lipophilicity, hydrogen bonding, chemical and thermal stability.

L13 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:247125 CAPLUS

ED Entered STN: 17 Mar 2006

TI Biocatalysis in novel functionalized ionic liquids

AU Falcioni, Francesco; Walker, Adam J.; Bruce, Neil C.

CS CNAP, Department of Biology, University of York, York, YO10 5DD, UK

SO Abstracts of Papers, 231st ACS National Meeting, Atlanta, GA, United States, March 26-30, 2006 (2006), IEC-114 Publisher: American Chemical Society, Washington, D. C.

CODEN: 69HYEC

DT Conference; Meeting Abstract; (computer optical disk)

LA English

AB Ionic liqs. used as biocatalytic solvents can overcome the limitations imposed by water by dissolving higher concns. of organic substrates, while offering major advantages in replacing mol. solvents, owing to their compatibility with high-order biomol. structures, negligible vapor pressure, non-flammability, stability and recyclability. The majority of ionic liqs. studied so far belong to the dialkylimidazolium group and suffer from high viscosity, difficult product recovery, significant toxicity and unproven biodegradability. Rational functionalisation of ionic liqs. can improve their performance: a range of novel ionic liqs. based upon functionalised alkanolammonium nuclei offer significant improvements over imidazolium salts and their analogs,. This project aims to address their application as alternative media for biocatalysis using purified hydrolases. A comparative study of activity and conformation through complementary techniques will clarify the nature of the interactions between protein and ionic liqs. and identify the parameters directing the choice of the best ionic liquid for a given biocatalytic reaction.

L13 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2005:1170512 CAPLUS

DN 143:435309

ED Entered STN: 03 Nov 2005

TI Affinity chromatography using ionic liquids

IN Walker, Adam John

PA The University of York, UK

SO PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07K001-22
ICS C12N011-14
CC 9-3 (Biochemical Methods)
Section cross-reference(s): 1, 3, 4, 7, 15, 50

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005103070	A1	20051103	WO 2005-GB1549	20050421
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
GB 2429284	A	20070221	GB 2006-22206	20050421
GB 2429284	B	20080730		
PRAI GB 2004-8854	A	20040421		
WO 2005-GB1549	W	20050421		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2005103070	ICM	C07K001-22
	ICS	C12N011-14
	IPCI	C07K0001-22 [ICM,7]; C07K0001-00 [ICM,7,C*]; C12N0011-14 [ICS,7]; C12N0011-00 [ICS,7,C*]
	IPCR	C07K0001-00 [I,C*]; C07K0001-22 [I,A]; C12N0011-00 [I,C*]; C12N0011-00 [I,A]; C12N0011-14 [I,A]
	ECLA	C07K001/22; C12N011/00
GB 2429284	IPCI	C07K0001-22 [I,A]; C12N0011-14 [I,A]; C07K0001-00 [I,C]; C07K0001-22 [I,A]; C12N0011-00 [I,C]; C12N0011-14 [I,A]
	IPCR	C07K0001-00 [I,C]; C07K0001-22 [I,A]; C12N0011-00 [I,C]; C12N0011-00 [I,A]; C12N0011-14 [I,A]
	ECLA	C07K001/22; C12N011/00; C12N011/14

AB The present invention relates to a composition for separating a target mol. from, or

in, an ionic liquid the composition comprising: (iii) a liquid medium comprising an ionic liquid; and (ii) a binding agent that is bound to a support wherein the binding agent is specific for a target mol.

ST affinity chromatog ionic liq

IT Bond

(-disrupting agent; affinity chromatog. using ionic liqs.)

IT Functional groups

(Alkenyl; affinity chromatog. using ionic liqs.)

IT Reaction

(Biol. or chemical; affinity chromatog. using ionic liqs.)

IT Proteins

RL: ANT (Analyte); CPS (Chemical process); NUU (Other use, unclassified);

PEP (Physical, engineering or chemical process); ANST (Analytical study);

PROC (Process); USES (Uses)

(DNA-binding; affinity chromatog. using ionic liqs.)

IT Apparatus

(Filtration; affinity chromatog. using ionic liqs.)

IT Anions

(Halogenated inorg.; affinity chromatog. using ionic liqs.)

IT Interface

(Phase; affinity chromatog. using ionic liqs.)

IT Ions
(Quaternary nitrogen or phosphorus-based; affinity chromatog. using ionic liqs.)

IT Functional groups
(Thio; affinity chromatog. using ionic liqs.)

IT Affinity chromatography
Amino group
Anions
Binders
Carbonyl group
Carboxyl group
Cations
Chemical formula
Columns and Towers
Composition
Drugs of abuse
Dyes
Explosives
Filaments
Functional groups
Gels
Hydroxyl group
Ionic liquids
Ions
Liquid chromatography
Micelles
Molecules
Nanoparticles
Pharmaceutical analysis
Separation
Solids
Solutions
Volume
Washing
(affinity chromatog. using ionic liqs.)

IT Biochemical compounds
Opioids
Toxins
RL: ANT (Analyte); ANST (Analytical study)
(affinity chromatog. using ionic liqs.)

IT Agglutinins and Lectins
Antibodies and Immunoglobulins
Antigens
Avidins
Coenzymes
DNA
Enzymes, analysis
Fatty acids, analysis
Hormones, animal, analysis
Nucleic acids
Oligonucleotides
Peptides, analysis
RNA
Receptors
RL: ANT (Analyte); CPS (Chemical process); NUU (Other use, unclassified);
PEP (Physical, engineering or chemical process); ANST (Analytical study);
PROC (Process); USES (Uses)
(affinity chromatog. using ionic liqs.)

IT Carbohydrates, analysis
RL: ANT (Analyte); CPS (Chemical process); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)

(affinity chromatog. using ionic liqs.)

IT Polymers, analysis
 Proteins
 RL: ANT (Analyte); NUU (Other use, unclassified); ANST (Analytical study);
 USES (Uses)
 (affinity chromatog. using ionic liqs.)

IT Hormone receptors
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical
 process); PROC (Process)
 (affinity chromatog. using ionic liqs.)

IT Ligands
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical
 process); PROC (Process)
 (affinity chromatog. using ionic liqs.)

IT Carbonates, uses
 Fibers
 Fluoropolymers, uses
 Glass, uses
 Nitrates, uses
 Polyamides, uses
 Polycarbonates, uses
 Polyesters, uses
 Polyoxyalkylenes, uses
 Polyphosphates
 Sulfates, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (affinity chromatog. using ionic liqs.)

IT Polymers, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (co-; affinity chromatog. using ionic liqs.)

IT Solvents
 (cosolvents; affinity chromatog. using ionic liqs.)

IT Carboxylic acids, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (esters; affinity chromatog. using ionic liqs.)

IT Antibodies and Immunoglobulins
 RL: ANT (Analyte); CPS (Chemical process); NUU (Other use, unclassified);
 PEP (Physical, engineering or chemical process); ANST (Analytical study);
 PROC (Process); USES (Uses)
 (fragments; affinity chromatog. using ionic liqs.)

IT Liquids
 (medium; affinity chromatog. using ionic liqs.)

IT Halogens
 RL: NUU (Other use, unclassified); USES (Uses)
 (polymer derivs.; affinity chromatog. using ionic liqs.)

IT Proteins
 RL: ANT (Analyte); CPS (Chemical process); NUU (Other use, unclassified);
 PEP (Physical, engineering or chemical process); ANST (Analytical study);
 PROC (Process); USES (Uses)
 (recombinant; affinity chromatog. using ionic liqs.)

IT Sulfonic acids, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (salts; affinity chromatog. using ionic liqs.)

IT Solids
 (semi-; affinity chromatog. using ionic liqs.)

IT Enzymes, biological studies
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (substrate; affinity chromatog. using ionic liqs.)

IT Proteins
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical
 process); PROC (Process)
 (sugar-binding; affinity chromatog. using ionic liqs.)

IT Proteins
 RL: ANT (Analyte); NUU (Other use, unclassified); ANST (Analytical study);
 USES (Uses)
 (surface domains; affinity chromatog. using ionic liqs.)

IT Affinity
 (tag; affinity chromatog. using ionic liqs.)

IT 50-36-2, Cocaine 54-11-5, Nicotine 561-27-3, Heroin
 RL: ANT (Analyte); ANST (Analytical study)
 (affinity chromatog. using ionic liqs.)

IT 97002-71-6, Morphine dehydrogenase
 RL: CAT (Catalyst use); REM (Removal or disposal); PROC (Process); USES
 (Uses)
 (affinity chromatog. using ionic liqs.)

IT 58-85-5, Biotin
 RL: CPS (Chemical process); NUU (Other use, unclassified); PEP (Physical,
 engineering or chemical process); PROC (Process); USES (Uses)
 (affinity chromatog. using ionic liqs.)

IT 288-32-4, Imidazole, uses 7631-86-9, Silica, uses 7732-18-5, Water,
 uses 9002-84-0, Polytetrafluoroethylene 9002-86-2, Polyvinyl chloride
 9002-88-4, Polyethylene 9002-89-5 9003-05-8, Polyacrylamide
 9003-05-8D, Polyacrylamide, derivs. 9003-07-0, Polypropylene
 9003-17-2, Polybutadiene 9003-53-6, Polystyrene 9004-34-6, Cellulose,
 uses 9004-54-0, Dextran, uses 9005-53-2, Lignin, uses 9011-14-7,
 Polymethyl methacrylate 9012-36-6, Agarose 9014-63-5, Xylan
 25322-68-3, Polyethylene glycol 33410-59-2, Polyhema 33410-59-2D,
 Polyhema, derivs.
 RL: NUU (Other use, unclassified); USES (Uses)
 (affinity chromatog. using ionic liqs.)

IT 76-42-6P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (affinity chromatog. using ionic liqs.)

IT 12654-97-6, Triazine 14798-03-9, Ammonium, uses 16749-13-6,
 Phosphonium 16969-45-2, Pyridinium 17009-90-4, Imidazolium
 17009-91-5, Pyrazolium 17009-93-7, Pyrazinium 17009-95-9, Pyrimidinium
 17009-97-1, Pyridazinium 37306-44-8, Triazole
 RL: NUU (Other use, unclassified); USES (Uses)
 (cations; affinity chromatog. using ionic liqs.)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
 (1) Crane; US 5092992 A 1992 CAPLUS
 (2) Koch, P; WO 2004013612 A 2004 CAPLUS
 (3) Merck & Co Inc; EP 0529713 A 1993 CAPLUS
 (4) Visser; NATO SCIENCE SERIES, II: MATHEMATICS, PHYSICS AND CHEMISTRY 2003,
 V92, P137 CAPLUS

L13 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2009 ACS ON STN

AN 2005:1090138 CAPLUS

DN 143:386681

ED Entered STN: 12 Oct 2005

TI Ionic liquids containing protonated primary, secondary or
 tertiary ammonium ions

IN Walker, Adam John

PA The University of York, UK

SO Brit. UK Pat. Appl., 62 pp.
 CODEN: BAXXDU

DT Patent

LA English

IC ICM C07C215-08
 ICS C07C215-12; C07C217-30

CC 23-4 (Aliphatic Compounds)
 Section cross-reference(s): 45

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2412912	A	20051012	GB 2005-6984	20050407
	GB 2412912	B	20070711		
	AU 2005232025	A1	20051020	AU 2005-232025	20050407
	CA 2563458	A1	20051020	CA 2005-2563458	20050407
	WO 2005097731	A2	20051020	WO 2005-GB1364	20050407
	WO 2005097731	A3	20051124		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BC, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CN 1997620	A	20070711	CN 2005-80018219	20050407
	EP 1805131	A2	20070711	EP 2005-735988	20050407
FRAI	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
	JP 2007532525	T	20071115	JP 2007-506841	20050407
	MX 2006011531	A	20070326	MX 2006-11531	20061005
	IN 2006KN03208	A	20070608	IN 2006-KN3208	20061103
	KR 2007031302	A	20070319	KR 2006-723342	20061107
	US 20070185330	A1	20070809	US 2007-599694	20070119
	GB 2004-7908	A	20040407		
	WO 2005-GB1364	W	20050407		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
GB	2412912	ICM	C07C215-08
		ICS	C07C215-12; C07C217-30
		IPCI	C07C0215-00 [I,C]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C]; C07C0217-30 [I,A]
		IPCR	C07C0215-00 [I,C]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0215-40 [I,A]; C07C0217-00 [I,C]; C07C0217-30 [I,A]
		ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	B01J0031-02 [I,A]; B01J0031-04 [I,A]; C07C0215-40 [I,A]; C07C0215-00 [I,C*]
		IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; B01J0031-02 [I,C]; B01J0031-02 [I,A]; B01J0031-04 [I,C]; B01J0031-04 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
AU	2005232025	IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30
CA	2563458	IPCI	B01J0031-02 [I,A]; B01J0031-04 [I,A]; C07C0215-40 [I,A]; C07C0215-00 [I,C*]
		IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; B01J0031-02 [I,C]; B01J0031-02 [I,A]; B01J0031-04 [I,C]; B01J0031-04 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
WO	2005097731	IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
CN	1997620	IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30
		IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
		IPCR	C07C215/40; C07C215/08; C07C215/12; C07C217/30

IPCR C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]

EP 1805131 ECLA C07C215/40; C07C215/08; C07C215/12; C07C217/30
 IPCI C07C0215-40 [I,A]; C07C0215-00 [I,C*]
 IPCR C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]

JP 2007532525 ECLA C07C215/40; C07C215/08; C07C215/12; C07C217/30
 IPCI C07C0215-40 [I,A]; C07C0215-00 [I,C*]; C07C0311-03 [I,A]; C07C0311-00 [I,C*]
 IPCR C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]; C07C0311-00 [I,C]; C07C0311-03 [I,A]

MX 2006011531 FTERM 4H006/AA01; 4H006/AA03; 4H006/AB80
 IPCI B01J0031-02 [I,C*]; B01J0031-04 [I,C*]; C07C0215-40 [I,A]; C07C0215-00 [I,C*]

IN 2006KN03208 IPCI C07C0215-40 [I,C,M,7]; C07C0215-00 [I,C,S,7]
 KR 2007031302 IPCI C07C0215-40 [I,A]; C07C0215-00 [I,A]
 US 20070185330 IPCI C07C0215-02 [I,A]; C07C0215-00 [I,C*]; C07D0211-02 [I,A]; C07D0211-00 [I,C*]
 NCL 546/184.000; 564/281.000

OS MARPAT 143:386681

AB The present invention relates to ionic liqs. comprising an anion and a cation wherein the cation is a primary, secondary or tertiary ammonium ion containing a protonated nitrogen atom. The invention also provides processes for the manufacture of ionic liqs. For example, N,N-dimethylethanolammonium glycolate (I) was prepared by gradually adding glycolic acid to an alc. solution of N,N-dimethylethanolamine; after completion and neutralization, the cold alc. solution was filtered, solvent removed, then frozen in liquid nitrogen and lyophilized in vacuo. After gradually allowing the sample to warm to room temperature, 32.85 g (99% yield) of I as a pale yellow liquid was isolated. Preferred ionic liqs. contain ethanolammonium, diethanolammonium, N-butyl-diethanolammonium, N,N-dimethylethanolammonium, N-methylethanolammonium, N,N-di(methoxyethyl)ammonium and 1-(3-hydroxypropyl)putrescinium ions as cations.

ST amine acid; ammonium ionic liq prepn; primary ammonium ion prepn ionic liq; secondary ammonium ion prepn ionic liq; tertiary ammonium ion prepn ionic liq

IT Oxidation
 (enzymic; demonstration of application of ionic liqs. in enzymic oxidation of methanol to formaldehyde)

IT Green chemistry
 Ionic liquids
 (preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT Quaternary ammonium compounds, preparation
 RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT Acids, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT Solvents
 (preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions for use as solvent in industrial and com. applications)

IT Amines, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)

(primary; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT Carboxylic acids, uses
Sulfonic acids, uses
RL: NUU (Other use, unclassified); USES (Uses)
(salts, anion component for ionic liquid; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT Amines, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(secondary; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT Amines, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(tertiary; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 56-14-4, Succinate, uses 57-60-3, Pyruvate, uses 63-36-5, Salicylate, uses 71-47-6, Formate, uses 71-50-1, Acetate, uses 71-52-3, Hydrogen carbonate, uses 72-03-7, Propanoate, uses 74-81-7, Octanoate, uses 113-21-3, Lactate, uses 126-44-3, Citrate, uses 142-42-7, Fumarate, uses 149-61-1, Malate 150-43-6, uses 151-33-7, Hexanoate, uses 338-70-5, uses 461-55-2, Butanoate, uses 666-14-8, uses 766-76-7, Benzoate, uses 769-61-9, Mandelate 3342-79-8, Nonanoate 3398-75-2, Decanoate 3715-17-1, Tartrate, uses 3812-32-6, Carbonate, uses 7563-37-3, Heptanoate 7631-42-7, Phenylacetate, uses 10023-74-2, Pentanoate, uses 12627-13-3, Silicate 14066-19-4, Hydrogen phosphate, uses 14066-20-7, Dihydrogen phosphate, uses 14265-44-2, Phosphate, uses 14477-72-6, Trifluoroacetate ion, uses 14797-55-8, Nitrate, uses 14808-79-8, Sulphate, uses 14874-70-5, Tetrafluoroborate 14996-02-2, Hydrogen sulfate, uses 16053-58-0, Methanesulfonate anion 16887-00-6, Chloride, uses 16919-18-9, Hexafluorophosphate 17121-12-9, Metaphosphate (P40124-) 20461-54-5, Iodide, uses 20938-62-9, Pantothenate 24959-67-9, Bromide, uses 37181-39-8, Trifluoromethanesulfonate 41824-21-9, Crotonate 44864-55-3 45048-62-2 49681-69-8, Hydrogen tartrate, uses 59561-61-4 86848-98-8 86848-99-9 97901-86-5 98837-98-0 130434-58-1 328238-56-8 866621-22-9
RL: NUU (Other use, unclassified); USES (Uses)
(anion component for ionic liquid; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 176158-74-0P
RL: BSU (Biological study, unclassified); IMF (Industrial manufacture); NUU (Other use, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(biodegrdn. anal. of ionic liquid; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 20740-76-5 22852-66-0, Ethanolamine conjugate acid 26265-71-4 36833-63-3 36833-64-4 65591-62-0 90578-97-5 866567-32-0 866567-33-1 866567-34-2
RL: NUU (Other use, unclassified); USES (Uses)
(cation component for ionic liquid; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 67-56-1, Methanol, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(demonstration of application of ionic liqs. in enzymic oxidation of methanol to formaldehyde)

IT 50-00-0P, Formaldehyde, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(demonstration of application of ionic liqs. in enzymic

oxidation of methanol to formaldehyde)					
IT	2471-06-9P	2604-13-9P	2805-17-6P	3178-20-9P	4337-66-0P
	5988-51-2P	7487-79-8P	16530-72-6P	16830-40-3P	17618-31-4P
	17618-32-5P	17863-38-6P	18394-23-5P	20261-59-0P	20475-13-2P
	20748-72-5P	21829-52-7P	23251-72-1P	Diethanolamine acetate	
	23349-61-3P	25859-29-4P	26764-31-8P	28098-03-5P	28129-21-7P,
	Diethanolamine hydrobromide	29194-47-6P	29867-71-8P	29867-72-9P	
	29867-75-2P	29868-00-6P	29868-01-7P	29870-14-2P	29870-15-3P
	29870-18-6P	29870-19-7P	29870-25-5P	29870-26-6P	29870-27-7P
	29870-29-9P	30718-92-4P	30933-06-3P	31086-83-6P	31889-13-1P
	35423-90-6P	38491-11-1P	38739-74-1P	49753-18-6P	49753-20-0P
	51264-32-5P	51276-44-9P	53226-35-0P	53562-95-1P	53926-87-7P
	54300-24-2P	55756-39-3P	56409-18-8P	56669-87-5P	57117-29-0P
	58937-21-6P	59101-30-3P	59866-70-5P	60395-28-0P	62036-98-0P
	63517-71-5P	63517-72-6P	64601-03-2P	64601-04-3P	64601-14-5P
	67303-52-0P	67384-57-0P	68141-00-4P	68141-46-8P	68391-54-8P,
	Diethanolamine formate	68568-51-4P	68815-69-0P	68833-69-2P	
	68860-57-1P	68945-90-4P	69362-00-1P	69362-01-2P	75478-96-5P
	76788-90-4P	77534-69-1P	77534-73-7P	79266-74-3P	82801-62-5P
	84110-42-9P	84145-30-2P	84145-60-8P	84176-56-7P	86683-38-7P
	86683-39-8P	88331-27-5P	89855-93-6P	90000-02-5P	90434-46-1P
	93882-26-9P	93882-27-0P	93942-28-0P	93942-29-1P	95332-67-5P
	98005-86-8P	98837-33-3P	101901-23-9P	103079-19-2P	108067-35-2P
	109962-24-5P	111318-69-5P	116033-27-3P	117472-14-7P	126050-30-4P
	134227-25-1P	135691-53-1P	137360-57-7P	138036-64-3P	156814-01-6P
	164460-12-2P	181180-62-1P	205490-53-5P	205490-69-3P	209052-82-4P
	210040-56-5P	252280-99-2P	327156-58-1P	372169-26-1P	372169-30-7P
	329292-52-3P	815574-85-7P	857086-60-3P	857086-63-6P	866567-31-9P
	866567-31-9P	866567-35-3P	866567-36-4P	866567-37-5P	866567-38-6P
	866567-39-7P	866567-40-0P	866567-41-1P	866567-42-2P	866567-43-3P
	866567-44-4P	866567-45-5P	866567-46-6P	866567-47-7P	866567-48-8P
	866567-49-9P	866567-50-2P	866567-51-3P	866567-52-4P	866567-53-5P
	866567-54-6P	866567-55-7P	866567-56-8P	866567-57-9P	866567-58-0P
	866567-59-1P	866567-60-4P	866567-61-5P	866567-62-6P	866567-63-7P
	866567-65-9P	866567-67-1P	866567-69-3P	866567-70-6P	866567-71-7P
	866567-72-8P	866567-73-9P	866567-74-0P	866567-75-1P	866567-76-2P
	866567-77-3P	866567-78-4P	866567-79-5P	866567-80-8P	866567-81-9P
	866567-82-0P	866567-83-1P	866567-84-2P	866567-85-3P	866567-86-4P
	866567-87-5P	866567-88-6P	866567-89-7P	866567-90-0P	866567-91-1P
	866567-92-2P	866567-93-3P	866567-94-4P	866567-95-5P	866567-96-6P
	866567-97-7P	866567-98-8P	866567-99-9P	866568-00-5P	866568-01-6P
	866568-02-7P	866568-03-8P	866568-04-9P	866568-05-0P	866568-06-1P
	866568-07-2P	866568-08-3P	866568-09-4P	866568-10-7P	866568-11-8P
	866568-12-9P	866568-13-0P	866568-15-2P	866568-16-3P	866568-17-4P
	866568-18-5P	866568-19-6P	866568-20-9P	866568-21-0P	866568-22-1P
	866568-23-2P	866568-24-3P	866568-25-4P	866568-26-5P	866568-27-6P
	866568-28-7P	866568-29-8P	866568-30-1P	866568-31-2P	866568-32-3P
	866568-33-4P	866568-34-5P	866568-35-6P	866568-36-7P	866568-37-8P
	866568-38-9P	866568-39-0P	866568-40-3P	866568-41-4P	866568-42-5P
	866568-43-6P				

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT	866568-44-7P	866568-45-8P	866568-46-9P	866568-47-0P	866568-48-1P
	866568-49-2P	866568-50-5P	866568-51-6P	866568-52-7P	866568-53-8P
	866568-54-9P	866568-57-2P	866568-59-4P	866568-60-7P	866568-63-0P
	866568-64-1P	866568-65-2P	866568-66-3P	866568-67-4P	866568-68-5P
	866568-69-6P	866568-70-9P	866568-71-0P	866568-72-1P	866568-74-3P
	866568-75-4P	866568-76-5P	866568-78-7P	866568-79-8P	866568-80-1P
	866568-81-2P	866568-82-3P	866568-83-4P	866568-84-5P	866568-85-6P
	866568-86-7P	866568-87-8P	866568-88-9P	866568-89-0P	866568-90-3P

866568-91-4P	866568-92-5P	866568-94-7P	866568-96-9P	866568-98-1P
866569-00-8P	866569-01-9P	866569-02-0P	866569-03-1P	866569-04-2P
866569-05-3P	866569-06-4P	866569-07-5P	866569-08-6P	866569-09-7P
866569-10-0P	866569-11-1P	866569-12-2P	866569-13-3P	866569-14-4P
866569-15-5P	866569-16-6P	866569-17-7P	866569-18-8P	866569-19-9P
866569-20-2P	866569-21-3P	866569-22-4P	866569-23-5P	866569-24-6P
866569-25-7P	866569-26-8P	866569-27-9P	866569-28-0P	866569-29-1P
866569-30-4P	866569-31-5P	866569-32-6P	866569-33-7P	866569-34-8P
866569-35-9P	866569-36-0P	866569-37-1P	866569-38-2P	866569-39-3P
866569-40-6P	866569-41-7P	866569-42-8P	866569-43-9P	866569-44-0P
866569-45-1P	866569-46-2P	866569-47-3P	866569-48-4P	866569-49-5P
866569-50-8P	866569-51-9P	866569-52-0P	866569-53-1P	866569-54-2P
866569-55-3P	866569-56-4P	866569-57-5P	866569-58-6P	866569-59-7P
866569-60-0P	866569-61-1P	866569-62-2P	866569-63-3P	866569-64-4P
866569-65-5P	866569-66-6P	866569-68-8P	866569-69-9P	866569-70-2P
866569-71-3P	866569-72-4P	866569-73-5P	866569-74-6P	866569-75-7P
866569-76-8P	866569-77-9P	866569-78-0P	866569-79-1P	866569-80-4P
866569-81-5P	866569-82-6P	866569-83-7P	866569-84-8P	866569-85-9P
866569-86-0P	866569-87-1P	866569-88-2P	866569-89-3P	866569-90-6P
866569-91-7P	866569-92-8P	866569-93-9P	866569-94-0P	866569-95-1P
866569-96-2P	866569-97-3P	866569-98-4P	866569-99-5P	866570-00-5P
866570-01-6P	866570-02-7P	866570-03-8P	866570-04-9P	866570-05-0P
866570-06-1P	866570-07-2P	866570-08-3P	866570-09-4P	866570-10-7P
866570-11-8P	866570-12-9P	866570-13-0P	866570-14-1P	866570-15-2P
866570-16-3P	866570-17-4P	866570-18-5P	866570-19-6P	866570-20-9P
866570-21-0P	866570-22-1P	866570-23-2P	866570-24-3P	866570-25-4P
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866570-31-2P	866570-32-3P	866570-33-4P	866570-34-5P	866570-35-6P
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866570-41-4P	866570-42-5P	866570-43-6P	866570-44-7P	866570-45-8P
866570-46-9P	866570-47-0P	866570-48-1P	866570-49-2P	866570-50-5P
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866570-56-1P	866570-57-2P	866570-58-3P	866570-59-4P	866570-60-7P
866570-61-8P	866570-62-9P	866570-63-0P	866570-64-1P	866570-65-2P
866570-66-3P	866570-67-4P	866570-68-5P	866570-69-6P	866570-70-9P
866570-71-0P	866570-72-1P	866570-73-2P	866570-74-3P	866570-75-4P
866570-76-5P	866570-77-6P	866570-78-7P	866570-79-8P	866570-80-1P
866570-81-2P	866570-82-3P	866570-83-4P	866570-84-5P	866570-85-6P
866570-86-7P	866570-88-9P	866570-90-3P	866570-92-5P	866570-95-8P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 866570-97-0P	866570-99-2P	866571-01-9P	866571-03-1P	866571-04-2P
866571-05-3P	866571-06-4P	866571-07-5P	866571-08-6P	866571-09-7P
866571-10-0P	866571-11-1P	866571-12-2P	866571-13-3P	866571-14-4P
866571-15-5P	866571-16-6P	866571-17-7P	866571-18-8P	866571-19-9P
866571-20-2P	866571-21-3P	866571-22-4P	866571-23-5P	866571-24-6P
866571-25-7P	866571-26-8P	866571-27-9P	866571-28-0P	866571-29-1P
866571-30-4P	866571-31-5P	866571-32-6P	866571-33-7P	866571-34-8P
866571-35-9P	866571-36-0P	866571-37-1P	866571-38-2P	866571-39-3P
866571-40-6P	866571-41-7P	866571-42-8P	866571-43-9P	866571-44-0P
866571-45-1P	866571-46-2P	866571-47-3P	866571-48-4P	866571-49-5P
866571-50-8P	866571-51-9P	866571-52-0P	866571-53-1P	866571-54-2P
866571-55-3P	866571-56-4P	866571-57-5P	866571-58-6P	866571-59-7P
866571-60-0P	866571-61-1P	866571-62-2P	866571-63-3P	866571-64-4P
866571-65-5P	866571-66-6P	866571-67-7P	866571-68-8P	866571-69-9P
866571-70-2P	866571-71-3P	866571-72-4P	866571-73-5P	866571-74-6P
866571-75-7P	866571-76-8P	866571-77-9P	866571-78-0P	866571-79-1P
866571-80-4P	866571-81-5P	866571-82-6P	866622-51-7P	866622-67-5P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 79-14-1, Glycolic acid, reactions 102-79-4, N-Butyldiethanolamine 108-01-0, N,N-Dimethylethanolamine 82113-65-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Arizona State Univ; WO 2004114445 A1 CAPLUS

(2) Armstrong, D; Anal Chem 2001, V73, P3679 CAPLUS

(3) Basf; WO 2004090066 A1 CAPLUS

(4) Solvent Innovation; WO 03074494 A1 CAPLUS

(5) Staatliches Institut; DD 262042 A1 CAPLUS

(6) Studiengesellschaft; WO 03060057 A1 CAPLUS

(7) Williams, E; The J of Physical Chem 1977, V81(3) CAPLUS

L13 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:965647 CAPLUS

DN 142:109281

ED Entered STN: 12 Nov 2004

TI Cofactor-dependent enzyme catalysis in functionalized ionic solvents

AU Walker, Adam J.; Bruce, Neil C.

CS CNAP, Department of Biology (Area 8), University of York, York, YO10 5YW, UK

SO Chemical Communications (Cambridge, United Kingdom) (2004), (22), 2570-2571

CODEN: CHCOFS; ISSN: 1359-7345

PB Royal Society of Chemistry

DT Journal

LA English

CC 7-3 (Enzymes)

Section cross-reference(s): 16

OS CASREACT 142:109281

AB Functionalized, hydrogen-bonding ionic liqs. have been successfully evaluated as media for the performance of cofactor-dependent enzyme catalyzed oxidns.; the effects of incorporating hydroxyl groups into both the cation and anion have been studied and the dependence of activity upon water content has been evaluated.

ST oxidn catalyst enzyme cofactor functionalized ionic solvent; dehydrogenase cofactor functionalized ionic solvent

IT Hydrogen bond

Oxidation catalysts

(cofactor-dependent enzyme-catalyzed oxidns. in functionalized ionic solvents)

IT Enzymes, biological studies

RL: BSU (Biological study, unclassified); CAT (Catalyst use); BIOL (Biological study); USES (Uses)

(cofactor-dependent enzyme-catalyzed oxidns. in functionalized ionic solvents)

IT Coenzymes

RL: BSU (Biological study, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses)

(cofactor-dependent enzyme-catalyzed oxidns. in functionalized ionic solvents)

IT Solvents

(ionic; cofactor-dependent enzyme-catalyzed oxidns. in functionalized ionic solvents)

IT 467-13-0P, Codeinone

RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(NADP-dependent morphine dehydrogenase-catalyzed oxidation in functionalized ionic solvents)

IT 97002-71-6, Morphine dehydrogenase
 RL: BSU (Biological study, unclassified); CAT (Catalyst use); BIOL (Biological study); USES (Uses)
 (NADP-dependent morphine dehydrogenase-catalyzed oxidation in functionalized ionic solvents)

IT 24292-60-2
 RL: BSU (Biological study, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses)
 (NADP-dependent morphine dehydrogenase-catalyzed oxidation in functionalized ionic solvents)

IT 9028-53-9, Glucose dehydrogenase 9031-72-5, Alcohol dehydrogenase
 RL: CAT (Catalyst use); USES (Uses)
 (cofactor-dependent enzyme-catalyzed oxidns. in functionalized ionic solvents)

IT 7732-18-5, Water, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (cofactor-dependent enzyme-catalyzed oxidns. in functionalized ionic solvents)

IT 76-57-3, Codeine 616-47-7 627-30-5 1932-50-9, Potassium glycolate 79917-90-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (cofactor-dependent enzyme-catalyzed oxidns. in functionalized ionic solvents)

IT 67-64-1, Acetone, reactions 1198-69-2, D-Gluconolactone
 RL: RGT (Reagent); RACT (Reactant or reagent)
 (cofactor-dependent enzyme-catalyzed oxidns. in functionalized ionic solvents)

IT 174501-64-5, 1-Butyl-3-methylimidazolium hexafluorophosphate 227617-70-1, 1-Butyl-2,3-dimethylimidazolium hexafluorophosphate 355011-34-6 444724-05-4 670222-24-9 823179-37-9
 RL: NUU (Other use, unclassified); USES (Uses)
 (solvent; NADP-dependent morphine dehydrogenase-catalyzed oxidation in functionalized ionic solvents)

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Boonstra, B; Biomol Eng 2001, V18, P41 CAPLUS
- (2) Branco, L; Chem Eur J 2002, V8, P3671 CAPLUS
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- (14) Turner, M; Green Chem 2003, V5, P443 CAPLUS
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- (17) Zaks, A; J Biol Chem 1988, V263, P8017 CAPLUS

L13 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:606558 CAPLUS

DN 141:122407

ED Entered STN: 29 Jul 2004

TI Ionic liquid solvents for use in enzymic biocatalysis

IN Bruce, Neil Charles; Walker, Adam John

PA Cambridge University Technical Services Ltd., UK

SO PCT Int. Appl., 40 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C12P001-00

ICS C12P017-18

CC 16-1 (Fermentation and Bioindustrial Chemistry)

Section cross-reference(s): 7, 27

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004063383	A1	20040729	WO 2004-GB14	20040107
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ			
	AU 2004204209	A1	20040729	AU 2004-204209	20040107
	CA 2512744	A1	20040729	CA 2004-2512744	20040107
	EP 1594974	A1	20051116	EP 2004-700474	20040107
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
	JP 2006514832	T	20060518	JP 2006-500173	20040107
	IN 2005KN01489	A	20060707	IN 2005-KN1489	20050729
	US 20060154328	A1	20060713	US 2005-541670	20051230
PRAI	GB 2003-595	A	20030110		
	WO 2004-GB14	W	20040107		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004063383	ICM	C12P001-00
	ICS	C12P017-18
	IPCI	C12P0001-00 [ICM,7]; C12P0017-18 [ICS,7]
	IPCR	C12P0001-00 [I,C*]; C12P0001-00 [I,A]; C12P0007-02 [I,C*]; C12P0007-04 [I,A]; C12P0007-24 [I,C*]; C12P0007-24 [I,A]; C12P0007-26 [I,A]; C12P0017-18 [I,C*]; C12P0017-18 [I,A]
	ECLA	C12P001/00; C12P007/04; C12P007/24; C12P007/26; C12P017/18
AU 2004204209	IPCI	C12P0001-00 [ICM,7]; C12P0017-18 [ICS,7]
	ECLA	C12P001/00; C12P007/04; C12P007/24; C12P007/26; C12P017/18
CA 2512744	IPCI	C12P0001-00 [ICM,7]; C12P0017-18 [ICS,7]
	IPCR	C12P0001-00 [I,C*]; C12P0001-00 [I,A]; C12P0007-02 [I,C*]; C12P0007-04 [I,A]; C12P0007-24 [I,C*]; C12P0007-24 [I,A]; C12P0007-26 [I,A]; C12P0017-18 [I,C*]; C12P0017-18 [I,A]
	ECLA	C12P001/00; C12P007/04; C12P007/24; C12P007/26; C12P017/18
EP 1594974	IPCI	C12P0001-00 [ICM,7]; C12P0017-18 [ICS,7]
	IPCR	C12P0001-00 [I,C*]; C12P0001-00 [I,A]; C12P0007-02 [I,C*]; C12P0007-04 [I,A]; C12P0007-24 [I,C*]; C12P0007-24 [I,A]; C12P0007-26 [I,A]; C12P0017-18 [I,C*]; C12P0017-18 [I,A]
	ECLA	C12P001/00; C12P007/04; C12P007/24; C12P007/26; C12P017/18
JP 2006514832	IPCI	C12P0001-00 [I,A]; C12N0009-96 [I,A]
	FTERM	4B050/CC07; 4B050/HH02; 4B050/LL05; 4B064/CA21; 4B064/CD04; 4B064/DA16
IN 2005KN01489	IPCI	C12P0001-00 [ICM,7]; C12P0017-18 [ICS,7]
US 20060154328	IPCI	C12P0001-00 [I,A]
	IPCR	C12P0001-00 [I,A]; C12P0001-00 [I,C]; C12P0007-02 [I,C*]; C12P0007-04 [I,A]; C12P0007-24 [I,C*];

C12P0007-24 [I,A]; C12P0007-26 [I,A]; C12P0017-18 [I,C*]; C12P0017-18 [I,A]
 NCL 435/041.000
 ECLA C12P001/00; C12P007/04; C12P007/24; C12P007/26; C12P017/18

AB This invention relates to ionic liqs. and their use as solvents in biocatalysis. According to a first aspect of the invention there is provided a method of carrying out an enzyme-catalyzed reaction comprising providing a liquid reaction medium which comprises an ionic liquid including an ion which comprises a functional group selected from the group consisting of alkenyl, hydroxyl, amino, thio, carbonyl and carboxyl groups, providing in the liquid reaction medium an enzyme and a substrate for the enzyme, and allowing reaction of the substrate to occur.

ST ionic liq enzymic biocatalysis
 IT Oxidation
 Reduction
 (enzymic; ionic liquid solvents for use in enzymic biocatalysis)

IT Anions
 Cations
 Dissociation constant
 Ionic liquids
 Zwitterions
 (ionic liquid solvents for use in enzymic biocatalysis)

IT 7732-18-5, Water, processes 174501-64-5, BMImPF6 721942-96-7
 RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process)
 (ionic liquid solvents for use in enzymic biocatalysis)

IT 53-57-6P, NADPH 53-59-8P, NADP 53-84-9P, NAD 58-68-4P, NADH 67-63-0P, 2-Propanol, biological studies 67-64-1P, Acetone, biological studies 76-57-3P, Codeine 467-13-0P, Codeinone 2646-71-1P
 RL: BCP (Biochemical process); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
 (ionic liquid solvents for use in enzymic biocatalysis)

IT 9028-12-0, NADP alcohol dehydrogenase 9031-72-5, NAD-dependent alcohol dehydrogenase 97002-71-6, Morphine dehydrogenase
 RL: BCP (Biochemical process); BSU (Biological study, unclassified); CAT (Catalyst use); BIOL (Biological study); PROC (Process); USES (Uses)
 (ionic liquid solvents for use in enzymic biocatalysis)

IT 444724-05-4P
 RL: BCP (Biochemical process); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
 (ionic liquid solvents for use in enzymic biocatalysis)

IT 67-56-1, Methanol, reactions
 RL: BCP (Biochemical process); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)
 (ionic liquid solvents for use in enzymic biocatalysis)

IT 50-00-0P, Formaldehyde, preparation
 RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
 (ionic liquid solvents for use in enzymic biocatalysis)

IT 355011-34-6P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (ionic liquid solvents for use in enzymic biocatalysis)

IT 616-47-7, 1-Methylimidazole 627-30-5, 3-Chloro-1-propanol 16940-81-1, Hexafluorophosphoric acid 20667-12-3, Silver oxide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (ionic liquid solvents for use in enzymic biocatalysis)

IT 721942-97-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(ionic liquid solvents for use in enzymic biocatalysis)
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Anon; WO 0155060 A2 CAPLUS
(2) Anon; EP 1205555 A1 CAPLUS

L13 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2003:1013019 CAPLUS
DN 140:253740
ED Entered STN: 31 Dec 2003
TI Combined biological and chemical catalysis in the preparation of oxycodone
AU Walker, Adam J.; Bruce, Neil C.
CS Institute of Biotechnology, University of Cambridge, Cambridge, CB2 1QT,
UK
SO Tetrahedron (2004), 60(3), 561-568
CODEN: TETRA; ISSN: 0040-4020
PB Elsevier Science B.V.
DT Journal
LA English
CC 31-3 (Alkaloids)
OS CASREACT 140:253740
AB The opioid oxycodone was produced from codeine, using a combination of
chemical and biol. catalysis. The use of novel functionalized ionic
liqs. permitted this reaction to be performed in a single solvent.
ST oxycodone prepn codeine
IT Ionic liquids
(combined biol. and chemical catalysis in preparation of oxycodone)
IT Solvents
(ionic liqs.; combined biol. and chemical catalysis in preparation of
oxycodone)
IT 467-13-0P, Codeinone 509-66-0P, Neopinone
RL: BPN (Biosynthetic preparation); RCT (Reactant); SPN (Synthetic
preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant
or reagent)
(combined biol. and chemical catalysis in preparation of oxycodone)
IT 76-42-6P, Oxycodone
RL: BPN (Biosynthetic preparation); SPN (Synthetic preparation); BIOL
(Biological study); PREP (Preparation)
(combined biol. and chemical catalysis in preparation of oxycodone)
IT 97002-71-6, Morphine dehydrogenase
RL: CAT (Catalyst use); USES (Uses)
(combined biol. and chemical catalysis in preparation of oxycodone)
IT 670222-24-9P
RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP
(Preparation); USES (Uses)
(combined biol. and chemical catalysis in preparation of oxycodone)
IT 76-57-3, Codeine 616-47-7, 1-Methylimidazole 627-30-5,
3-Chloro-1-propanol 1422-07-7, Codeine hydrochloride 1932-50-9,
Potassium glycolate
RL: RCT (Reactant); RACT (Reactant or reagent)
(combined biol. and chemical catalysis in preparation of oxycodone)
IT 355011-34-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(combined biol. and chemical catalysis in preparation of oxycodone)

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Anon; Ionic liquids in synthesis 2002
(2) Boonstra, B; Biomol Engng 2001, V18, P41 CAPLUS
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 CAPLUS
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 (26) Walker, A; Submitted for publication
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=> d his

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(FILE 'HOME' ENTERED AT 12:57:44 ON 19 MAR 2009)

FILE 'REGISTRY' ENTERED AT 12:58:22 ON 19 MAR 2009
      E N,N-DIMETHYLETHANOLAMMONIUM FORMATE/CN
      E E2
L1      1 S E3

FILE 'CAPLUS' ENTERED AT 13:01:52 ON 19 MAR 2009
L2      1 S US20070185330/PN
L3      2 S DIMETHYLETHANOLAMMONIUM AND FORMATE

FILE 'CAPLUS' ENTERED AT 13:15:01 ON 19 MAR 2009

FILE 'REGISTRY' ENTERED AT 13:15:11 ON 19 MAR 2009
L4      2 S 59101-30-3/RN OR 53518-18-6/RN

FILE 'CAPLUS' ENTERED AT 13:16:40 ON 19 MAR 2009
      S 59101-30-3/REG#

FILE 'REGISTRY' ENTERED AT 13:18:46 ON 19 MAR 2009
L5      1 S 59101-30-3/RN

FILE 'CAPLUS' ENTERED AT 13:18:47 ON 19 MAR 2009
L6      6 S L5
L7      56 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND (FORMIC O
L8      0 S IONIC AND L7
L9      55 S L7 NOT L6
L10     62 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND IONIC
L11     6 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND (IONIC LI
      E WALKER ADAM JOHN/AU
L12     12 S E2 OR E3
L13     12 S L12 AND IONIC

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=> s (dimethylaminoethanol or dimethylamino ethanol) and l13

2798 DIMETHYLAMINOETHANOL
 77799 DIMETHYLAMINO
 324073 ETHANOL
 1061 DIMETHYLAMINO ETHANOL
 (DIMETHYLAMINO(W)ETHANOL)

L14 0 (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND L13

=> s 59101-30-3 and l13

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...

Use DISPLAY HITSR (or FHITSR) to directly view retrieved structures.

L16 6 L15

L17 1 L16 AND L13

=> d

L17 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2005:1090138 CAPLUS

DN 143:386681

TI Ionic liquids containing protonated primary, secondary or tertiary ammonium ions

IN Walker, Adam John

PA The University of York, UK

SO Brit. UK Pat. Appl., 62 pp.

CODEN: BAXXDU

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2412912	A	20051012	GB 2005-6984	20050407
	GB 2412912	B	20070711		
	AU 2005232025	A1	20051020	AU 2005-232025	20050407
	CA 2563458	A1	20051020	CA 2005-2563458	20050407
	WO 2005097731	A2	20051020	WO 2005-GB1364	20050407
	WO 2005097731	A3	20051124		
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	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	CN 1997620	A	20070711	CN 2005-80018219	20050407
	EP 1805131	A2	20070711	EP 2005-735988	20050407
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JP 2007532525	T	20071115	JP 2007-506841	20050407
MX 2006011531	A	20070326	MX 2006-11531	20061005
IN 2006KN03208	A	20070608	IN 2006-KN3208	20061103
KR 2007031302	A	20070319	KR 2006-723342	20061107
US 20070185330	A1	20070809	US 2007-599694	20070119
PRAI GB 2004-7908	A	20040407		
WO 2005-GB1364	W	20050407		

OS MARPAT 143:386681

RE,CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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(FILE 'HOME' ENTERED AT 12:57:44 ON 19 MAR 2009)

FILE 'REGISTRY' ENTERED AT 12:58:22 ON 19 MAR 2009
E N,N-DIMETHYLETHANOLAMMONIUM FORMATE/CN
E E2
L1 1 S E3

L2 FILE 'CAPLUS' ENTERED AT 13:01:52 ON 19 MAR 2009
1 S US20070185330/PN
L3 2 S DIMETHYLETHANOLAMMONIUM AND FORMATE

FILE 'CAPLUS' ENTERED AT 13:15:01 ON 19 MAR 2009

L4 FILE 'REGISTRY' ENTERED AT 13:15:11 ON 19 MAR 2009
2 S 59101-30-3/RN OR 53518-18-6/RN

FILE 'CAPLUS' ENTERED AT 13:16:40 ON 19 MAR 2009
S 59101-30-3/REG#

L5 FILE 'REGISTRY' ENTERED AT 13:18:46 ON 19 MAR 2009
1 S 59101-30-3/RN

FILE 'CAPLUS' ENTERED AT 13:18:47 ON 19 MAR 2009

L6 6 S L5
L7 56 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND (FORMIC O
L8 0 S IONIC AND L7
L9 55 S L7 NOT L6
L10 62 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND IONIC
L11 6 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND (IONIC LI
E WALKER ADAM JOHN/AU
L12 12 S E2 OR E3
L13 12 S L12 AND IONIC
L14 0 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND L13
S 59101-30-3/REG# AND L13

L15 FILE 'REGISTRY' ENTERED AT 13:38:11 ON 19 MAR 2009
1 S 59101-30-3/RN

L16 FILE 'CAPLUS' ENTERED AT 13:38:11 ON 19 MAR 2009
6 S L15
L17 1 S L16 AND L13

=> s l10 and l13
L18 0 L10 AND L13

=> file reg
COST IN U.S. DOLLARS

SINCE FILE TOTAL
ENTRY SESSION

FULL ESTIMATED COST	4.49	383.67
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-67.24

FILE 'REGISTRY' ENTERED AT 13:39:17 ON 19 MAR 2009
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 DICTIONARY FILE UPDATES: 17 MAR 2009 HIGHEST RN 1122748-29-1

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<http://www.cas.org/support/stngen/stdoc/properties.html>

=> e dimethylaminoethanol/cn

E1	1	DIMETHYLAMINOETHANE HYDROCHLORIDE/CN
E2	1	DIMETHYLAMINOETHANETHIOL S-SULFATE/CN
E3	0 -->	DIMETHYLAMINOETHANOL/CN
E4	1	DIMETHYLAMINOETHANOL 2-(3-TRIFLUOROMETHYL)PHENOXYNICOTINATE/CN
E5	1	DIMETHYLAMINOETHANOL 3-PYRIDINECARBOXYLATE/CN
E6	1	DIMETHYLAMINOETHANOL 4-CHLOROPHENOXYISOBUTYRATE/CN
E7	1	DIMETHYLAMINOETHANOL 7-THEOPHYLLINEACETATE/CN
E8	1	DIMETHYLAMINOETHANOL ACETATE/CN
E9	1	DIMETHYLAMINOETHANOL ACETYSALICYLATE/CN
E10	1	DIMETHYLAMINOETHANOL BITARTRATE/CN
E11	1	DIMETHYLAMINOETHANOL CYCLOBUTANECARBOXYLATE/CN
E12	1	DIMETHYLAMINOETHANOL GLUTAMATE/CN

=> e dimethylamino ethanol/cn

E1	1	DIMETHYLAMINIUM/CN
E2	1	DIMETHYLAMINO/CN
E3	0 -->	DIMETHYLAMINO ETHANOL/CN
E4	1	DIMETHYLAMINO ETHOXY DISULFIDE/CN
E5	1	DIMETHYLAMINO ETHYL METHACRYLATE-N-(Γ-HYDROXYETHYL)-N-(Γ-METHACRYLOXYETHYL)-N,N-DIMETHYLAMMONIUM CHLORIDE PO LYMERS/CN
E6	1	DIMETHYLAMINO ISOCYANATE/CN
E7	1	DIMETHYLAMINO RADICAL/CN
E8	1	DIMETHYLAMINO SALT OF 3',4'-DICHLOROBENZENESULFONYLSISOUREA/CN
E9	1	DIMETHYLAMINO SALT OF P-ACETYLAMINO BENZENESULFONYLSISOUREA/CN
E10	1	DIMETHYLAMINO (METHYL)SILENE/CN
E11	1	DIMETHYLAMINO-1-METHYLETHYL P-CHLOROPHENOXYACETATE/CN
E12	1	DIMETHYLAMINO-2,4,5-TRICHLOROBENZOATE/CN

=> s c3h1101n1/mf
L19 0 C3H1101N1/MF

=> s c3h110n/mf
L20 0 C3H110N/MF

=> s c3h11no/mf
L21 0 C3H11NO/MF

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s dimethylaminoethanol
L22 2798 DIMETHYLAMINOETHANOL

=> d 1-5

L22 ANSWER 1 OF 2798 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2009:236670 CAPLUS
TI Low viscosity liquid curable epoxy resin compositions and their cured products
IN Kamata, Ami; Sawada, Goro; Maruyama, Isao; Haba, Kazuhiko
PA Maruzen Oil Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 21pp.
CODEN: JKXXAF
DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2009040989	A	20090226	JP 2008-7860	20080117
PRAI	JP 2007-188569	A	20070719		

L22 ANSWER 2 OF 2798 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2009:236594 CAPLUS

TI Modified polyolefin aqueous dispersions showing good dispersion stability without using emulsifying agents

IN Kiyosada, Shunji; Oishi, Kei; Nakagiri, Ryuzaburo; Oshita, Shinichi

PA Seiko PMC Corporation, Japan

SO Jpn. Kokai Tokkyo Koho, 22pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2009040920	A	20090226	JP 2007-208643	20070809
PRAI	JP 2007-208643		20070809		

L22 ANSWER 3 OF 2798 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2009:197674 CAPLUS

DN 150:228306

TI Electric circuit patterns and electrically conducting films, their manufacture by printing, and their laminates with cation exchangers

IN Sato, Mutsuko; Sakaguchi, Kaori; Shiraishi, Kinya; Kamoshita, Miyuki

PA Toyo Ink Mfg. Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 30pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2009037943	A	20090219	JP 2007-202555	20070803
PRAI	JP 2007-202555		20070803		

L22 ANSWER 4 OF 2798 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2009:173771 CAPLUS

TI Synthesis, characterization and catalytic activity of novel Co(II) and Pd(II)-perfluoroalkylphthalocyanine in fluorous biphasic system; benzyl alcohol oxidation

AU Ozer, Metin; Yilmaz, Filiz; Erer, Hakan; Kani, Ibrahim; Bekaroglu, Ozer

CS Department of Chemistry, Marmara University, Istanbul, 34722, Turk.

SO Applied Organometallic Chemistry (2009), 23(2), 55-61

CODEN: AOCHEX; ISSN: 0268-2605

PB John Wiley & Sons Ltd.

DT Journal

LA English

RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 5 OF 2798 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2009:145165 CAPLUS

TI Synthesis of polyhedral oligosilsesquioxanes containing isocyanate groups in an organic shell of the silsesquioxane core

AU Klimenko, N. S.; Gumennaya, M. A.; Shevchuk, A. V.; Dordii, N. K.;

Shevchenko, V. V.

CS Institute of Chemistry of High Molecular Compounds, National Academy of

Sciences of Ukraine, Kiev, Ukraine
 SO Dopovidi Natsional'noi Akademii Nauk Ukraini (2008), (12), 117-121
 CODEN: DNAUFL; ISSN: 1025-6415
 PB Vidavnychii Dim "Akademperiodika"
 DT Journal
 LA Russian

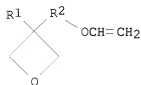
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L22 ANSWER 1 OF 2798 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2009:236670 CAPLUS
 ED Entered STN: 27 Feb 2009
 TI Low viscosity liquid curable epoxy resin compositions and their cured products
 IN Kamata, Ami; Sawada, Goro; Maruyama, Isao; Haba, Kazuhiko
 PA Maruzen Oil Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 21pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 CC 42-9 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 37

PATENT NO.		KIND	DATE	APPLICATION NO.	DATE
PI	JP 2009040989	A	20090226	JP 2008-7860	20080117
PRAI	JP 2007-188569	A	20070719		

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2009040989	IPCI	C08G0059-68 [I,A]; C08G0059-00 [I,C*]; C08G0065-22 [I,A]; C08G0065-00 [I,C*]; C08L0063-00 [I,A]
	FTERM	4J002/CD021; 4J002/CD051; 4J002/EB118; 4J002/EE059; 4J002/EJ019; 4J002/EJ029; 4J002/EL056; 4J002/EN029; 4J002/EN109; 4J002/EN138; 4J002/EQ018; 4J002/EU119; 4J002/EV298; 4J002/EV319; 4J002/EW178; 4J002/EW179; 4J002/EY018; 4J002/FD039; 4J002/FD146; 4J002/FD158; 4J002/GH00; 4J002/GH01; 4J002/GJ01; 4J002/GQ01; 4J002/GQ05; 4J005/AA09; 4J005/BB02; 4J036/AA01; 4J036/AD08; 4J036/AJ09; 4J036/EA01; 4J036/FA10; 4J036/FA12; 4J036/GA01; 4J036/GA02; 4J036/GA03; 4J036/GA04; 4J036/GA06; 4J036/HA02; 4J036/JA01; 4J036/JA06; 4J036/JA07; 4J036/JA15

GI



I

AB The title compns., useful for coatings, inks, adhesives, etc., contain epoxy resins, vinyl ether-containing oxetanes represented by I [R1 = H, C1-4 alkyl; R2 = (ether-containing) C1-4 alkylene], and cationic polymerization initiators. Thus, a composition containing 3,4-epoxycyclohexane-based epoxy resin
 (II; Celloxide 2081) 70, 3-ethyl-3-(vinylloxymethyl)oxetane (III) 30, and

sulfonium salt thermal polymerization initiator (Adeka Opton CP 66) 1 parts showed viscosity 46.6 mPa.s at 23° and cured at 100° for 3 h and 150° for 4 h to give a test piece showing Tg 87°. A composition containing II 70, III 30, diaryl iodonium salt photopolymn. initiator

(Irgacure 250) 1, and silicone surface conditioner 1 part was applied on a mild steel plate and irradiated with UV to give a coating showing good adhesion, flat surface with no wrinkle, and pencil hardness (JIS k 5400) H.

ST epoxy resin oxetane liq curable low viscous; epoxycyclohexane sulfonium polymn initiator cured product; ethylvinylloxymethyloxetane liq epoxy resin curable coating

IT Polymerization catalysts
(cationic; low viscosity liquid curable epoxy resin compns. for cured products)

IT Polyethers
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(epoxy-polyester-; low viscosity liquid curable epoxy resin compns. for cured products)

IT Polyesters
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(epoxy-polyether-; low viscosity liquid curable epoxy resin compns. for cured products)

IT Polyethers
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(epoxy; low viscosity liquid curable epoxy resin compns. for cured products)

IT Epoxy resins
RL: POF (Polymer in formulation); USES (Uses)
(low viscosity liquid curable epoxy resin compns. for cured products)

IT Epoxy resins
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyester-polyether-; low viscosity liquid curable epoxy resin compns. for cured products)

IT Epoxy resins
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyether-; low viscosity liquid curable epoxy resin compns. for cured products)

IT Onium compounds
Sulfonium compounds
RL: CAT (Catalyst use); USES (Uses)
(polymerization initiators; low viscosity liquid curable epoxy resin compns. for cured products)

IT Coating materials
(storage-stable; low viscosity liquid curable epoxy resin compns. for cured products)

IT 25068-38-6, Bisphenol A epoxy resin
RL: POF (Polymer in formulation); USES (Uses)
(assumed monomers; low viscosity liquid curable epoxy resin compns. for cured products)

IT 15805-97-7P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(low viscosity liquid curable epoxy resin compns. for cured products)

IT 1121544-92-OP 1121544-93-1P 1121544-94-2P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)
 (low viscosity liquid curable epoxy resin compns. for cured products)
 IT 1333-16-0D, Bisphenol F, epoxy resin
 RL: POF (Polymer in formulation); USES (Uses)
 (low viscosity liquid curable epoxy resin compns. for cured products)
 IT 74-86-2, Acetylene 3047-32-3, 3-Ethyl-3-hydroxymethylloxetane
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (low viscosity liquid curable epoxy resin compns. for cured products)
 IT 108-01-0, 2-Dimethylaminoethanol
 RL: TEM (Technical or engineered material use); USES (Uses)
 (low viscosity liquid curable epoxy resin compns. for cured products)
 IT 92-84-2, Phenothiazine 128-37-0, 2,6-Di-tert-butyl-4-methylphenol
 150-76-5, p-Methoxyphenol
 RL: CAT (Catalyst use); USES (Uses)
 (polymerization inhibitor; low viscosity liquid curable epoxy resin compns.
 for cured products)
 IT 75482-18-7, CPI 100P 87301-62-0, Adeka Opton CP 66 344562-80-7,
 Irgacure 250
 RL: CAT (Catalyst use); USES (Uses)
 (polymerization initiator; low viscosity liquid curable epoxy resin compns.
 for cured products)

L22 ANSWER 2 OF 2798 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2009:236594 CAPLUS
 ED Entered STN: 27 Feb 2009
 TI Modified polyolefin aqueous dispersions showing good dispersion stability
 without using emulsifying agents
 IN Kiyosada, Shunji; Oishi, Kei; Nakagiri, Ryuzaburo; Oshita, Shinichi
 PA Seiko PMC Corporation, Japan
 SO Jpn. Kokai Tokkyo Koho, 22pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 CC 42-10 (Coatings, Inks, and Related Products)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2009040920	A	20090226	JP 2007-208643	20070809
PRAI	JP 2007-208643		20070809		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2009040920	IPCI	C08J0003-02 [I,A]; C08L0051-06 [I,A]; C08L0051-00 [I,C*]; C08K0005-17 [I,A]; C08K0005-00 [I,C*]; C08F0255-04 [I,A]; C08F0255-00 [I,C*]
	FTERM	4F070/AA13; 4F070/AB08; 4F070/AC12; 4F070/AC36; 4F070/AC38; 4F070/AC39; 4F070/AC46; 4F070/AE14; 4F070/AE28; 4F070/CA18; 4F070/CB12; 4J002/BN051; 4J002/BN061; 4J002/BN091; 4J002/FD206; 4J002/GH01; 4J002/GJ01; 4J002/HA06; 4J026/AA11; 4J026/AA12; 4J026/AA13; 4J026/BA27; 4J026/CA02; 4J026/FA03; 4J026/FA04; 4J026/GA09
AB		Title compns. comprise (A) modified polyolefins prepared by grafting (a2) 3-20 parts unsatd. carboxylic acids and (a3) 4.5-40 parts (meth)acrylic acid alkyl esters on (a1) 100 parts polyolefins containing ethylene and propylene, (B) basic compds., and (C) dispersion media comprising (c1) H2O or (c2) mixed solvents containing H2O and ≤50 parts (for 100 parts of A) organic solvents with solubility for H2O ≥2.5% at normal pressure and 20°. Thus, a modified polyolefin prepared from Licocene PP 1602 (ethylene-propylene copolymer), maleic anhydride, and 2-ethylhexyl

acrylate, 2-methyl-2-aminopropanol, and H2O were mixed to give an emulsion showing good storage stability after 1 wk at 40°. Then, the emulsion was applied on a polypropylene sheet to give a coating with adhesion strength 450 g/cm.

ST acrylate grafted ethylene propylene copolymer aq dispersion; coating aq polyolefin acrylate grafted maleated; amine aq coating acrylate grafted maleated polyolefin; dispersion stability aq coating modified polyolefin

IT Polyolefins
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic, graft, maleated; modified polyolefin aqueous dispersions with good dispersion stability and high adhesion strength)

IT Coating materials
 (emulsions, water-thinned; modified polyolefin aqueous dispersions with good dispersion stability and high adhesion strength)

IT Amines
 Bases
 RL: MOA (Modifier or additive use); USES (Uses) (modified polyolefin aqueous dispersions with good dispersion stability and high adhesion strength)

IT Alcohols
 RL: NUU (Other use, unclassified); USES (Uses) (solvents; modified polyolefin aqueous dispersions with good dispersion stability and high adhesion strength)

IT 116219-88-6P 556112-73-3P 678991-17-8P 1060720-62-8P, 2-ethylhexyl acrylate-maleic anhydride-Vestoplast 708 graft copolymer 1060720-70-8P 1119199-64-2P 1119199-66-4P 1119199-71-1P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (modified polyolefin aqueous dispersions with good dispersion stability and high adhesion strength)

IT 108-01-0, Dimethylaminoethanol 124-68-5, 2-Methyl-2-aminopropanol 1310-73-2, Sodium hydroxide 1336-21-6, Ammonium hydroxide
 RL: MOA (Modifier or additive use); USES (Uses) (modified polyolefin aqueous dispersions with good dispersion stability and high adhesion strength)

IT 74-85-1D, Ethylene, graft copolymers with propylene, unsatd. carboxylic acids, and alkyl (meth)acrylates 115-07-1D, Propylene, graft copolymers with ethylene, unsatd. carboxylic acids, and alkyl (meth)acrylates
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses) (modified polyolefin aqueous dispersions with good dispersion stability and high adhesion strength)

IT 67-63-0, Isopropanol 71-36-3, 1-Butanol 71-41-0, 1-Pentanol 78-92-2, 2-Butanol 78-93-3, Methyl ethyl ketone 111-76-2, Butyl cellosolve 7732-18-5, Water
 RL: NUU (Other use, unclassified); USES (Uses) (solvents; modified polyolefin aqueous dispersions with good dispersion stability and high adhesion strength)

L22 ANSWER 3 OF 2798 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2009:197674 CAPLUS
 DN 150:228306
 ED Entered STN: 19 Feb 2009
 TI Electric circuit patterns and electrically conducting films, their manufacture by printing, and their laminates with cation exchangers
 IN Sato, Mutsuko; Sakaguchi, Kaori; Shiraishi, Kinya; Kamoshita, Miyuki
 PA Toyo Ink Mfg. Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 30pp.
 CODEN: JKXXAF
 DT Patent

LA Japanese
CC 76-14 (Electric Phenomena)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2009037943	A	20090219	JP 2007-202555	20070803
PRAI	JP 2007-202555		20070803		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	JP 2009037943	IPCI	H01B0013-00 [I,A]; H01B0005-14 [I,A]; H01B0001-00 [I,A]; H01B0001-22 [N,A]
		FTERM	5G301/DA02; 5G301/DA03; 5G301/DA05; 5G301/DA06; 5G301/DA07; 5G301/DA10; 5G301/DA11; 5G301/DA12; 5G301/DA42; 5G301/DD02; 5G301/DE01; 5G307/FA01; 5G307/FA02; 5G307/FB02; 5G307/FC10; 5G307/GA06; 5G307/GB02; 5G307/GC02
AB	Title manufacturing method includes touching elec. conducting materials coated with N and/or S-containing protective layers to cation exchangers. Is also claimed, the manufacturing process by printing with circuit patterns using inks or coatings containing elec. conducting materials on cationic exchange layers. The laminates are useful for an antenna for a noncontact IC medium. The cationic exchange layers expose the elec. conducting materials (e.g., Ag) by releasing the protective layers or exchanging with cations and accelerate film-forming process.		
ST	silver circuit pattern printing cation exchanger; surfactant protective layer silver cation exchanger		
IT	Cation exchangers Laminated materials Printed circuits (elec. circuit patterns laminated with cationic exchange layers manufactured by printing)		
IT	Films (elec. conductive; elec. circuit patterns and elec. conducting films, their manufacture by printing, and their laminates with cation exchangers)		
IT	Electric conductors (films; elec. circuit patterns and elec. conducting films, their manufacture by printing, and their laminates with cation exchangers)		
IT	copper alloy, nonbase gold alloy, nonbase iron alloy, nonbase nickel alloy, nonbase palladium alloy, nonbase platinum alloy, nonbase silver alloy, nonbase RL: TEM (Technical or engineered material use); USES (Uses) (elec. conductor; elec. circuit patterns laminated with cationic exchange layers manufactured by printing)		
IT	151-21-3, Emal 0, uses 95145-35-0, Gohsenal T 350 RL: TEM (Technical or engineered material use); USES (Uses) (cationic exchange; elec. circuit patterns laminated with cationic exchange layers manufactured by printing)		
IT	7631-86-9, Snowtex 40, uses RL: TEM (Technical or engineered material use); USES (Uses) (colloidal, cationic exchange; elec. circuit patterns laminated with cationic exchange layers manufactured by printing)		
IT	5489-14-5, Silver propionate 7761-88-8, Silver nitrate, reactions RL: RCT (Reactant); RACT (Reactant or reagent) (elec. circuit patterns laminated with cationic exchange layers manufactured by printing)		
IT	7440-22-4P, Silver, uses RL: IMF (Industrial manufacture); TEM (Technical or engineered material		

use); PREP (Preparation); USES (Uses)

(elec. conductor; elec. circuit patterns laminated with cationic exchange layers manufactured by printing)

IT 7439-89-6, Iron, uses 7440-02-0, Nickel, uses 7440-05-3, Palladium, uses 7440-06-4, Platinum, uses 7440-50-8, Copper, uses 7440-57-5, Gold, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(elec. conductor; elec. circuit patterns laminated with cationic exchange layers manufactured by printing)

IT 108-01-0, Dimethylaminoethanol 358377-01-2, Ajisper PB 821 375798-26-8, Solspers 32000

RL: TEM (Technical or engineered material use); USES (Uses)

(protective layer; elec. circuit patterns laminated with cationic exchange layers manufactured by printing)

L22 ANSWER 4 OF 2798 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2009:173771 CAPLUS

ED Entered STN: 12 Feb 2009

TI Synthesis, characterization and catalytic activity of novel Co(II) and Pd(II)-perfluoroalkylphthalocyanine in fluorous biphasic system; benzyl alcohol oxidation

AU Ozer, Metin; Yilmaz, Filiz; Erer, Hakan; Kani, Ibrahim; Bekaroglu, Ozer

CS Department of Chemistry, Marmara University, Istanbul, 34722, Turk.

SO Applied Organometallic Chemistry (2009), 23(2), 55-61

CODEN: AOCHEX; ISSN: 0268-2605

PB John Wiley & Sons Ltd.

DT Journal

LA English

CC 25 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

AB Tetrakis[heptadecafluorononyl] substituted phthalocyanine complexes were prepared by template synthesis from 4-

(heptadecafluorononyloxy)phthalonitrile with Co(CH₃COO).24H₂O or PdCl₂ in 2-N,N-dimethylaminoethanol. The corresponding phthalonitrile

was obtained from heptadecafluorononan-1-ol and 4-nitrophthalonitrile with K₂CO₃ in DMF at 50 °C. The structures of the compds. were

characterized by elemental anal., FTIR, UV-vis and MALDI-TOF MS

spectroscopic methods. Metallophthalocyanines are soluble in fluoroalkanes such as perfluoromethylcyclohexane (PFMCH). The complexes were tested as

catalysts for benzyl alc. oxidation with tert-butylhydroperoxide (TBHP) in an organic-fluorous biphasic system (n-hexane-PFMCH). The oxidation of benzyl

alc.

was also tested with different oxidants, such as hydrogen peroxide, m-chloroperoxybenzoic acid, mol. oxygen and oxone in n-hexane-PFMCH. TBHP was found to be the best oxidant for benzyl alc. oxidation since higher conversion and selectivity were observed when this oxidant was used.

RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L22 ANSWER 5 OF 2798 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2009:145165 CAPLUS

ED Entered STN: 06 Feb 2009

TI Synthesis of polyhedral oligosilsesquioxanes containing isocyanate groups in an organic shell of the silsesquioxane core

AU Klimenko, N. S.; Gumennaya, M. A.; Shevchuk, A. V.; Dordii, N. K.; Shevchenko, V. V.

CS Institute of Chemistry of High Molecular Compounds, National Academy of Sciences of Ukraine, Kiev, Ukraine

SO Dopovidi Natsional'noi Akademii Nauk Ukraini (2008), (12), 117-121

CODEN: DNAUPL; ISSN: 1025-6415

PB Vidavnychii Dim "Akademperiodika"

DT Journal
LA Russian
CC 37 (Plastics Manufacture and Processing)
AB A mixture of polyhedral oligosilsesquioxanes containing isocyanate groups in
the organic shell of a silsesquioxane core (POSS-NCO) is synthesized by the
reaction of a mixture of polyhedral oligosilsesquioxanes with tertiary
amine, primary and secondary hydroxylic groups in the organic part of the
mol. (POSS-M) with excess of toluene diisocyanate. Its derivative is
obtained by the reaction of POSS-NCO with N,N-dimethylaminoethanol
. The structure of the synthesized compds. is characterized by GPC, ¹H
NMR, and IR spectroscopy.

=> d his

(FILE 'HOME' ENTERED AT 12:57:44 ON 19 MAR 2009)
FILE 'REGISTRY' ENTERED AT 12:58:22 ON 19 MAR 2009
E N,N-DIMETHYLETHANOLAMMONIUM FORMATE/CN
E E2
L1 1 S E3
FILE 'CAPLUS' ENTERED AT 13:01:52 ON 19 MAR 2009
L2 1 S US20070185330/PN
L3 2 S DIMETHYLETHANOLAMMONIUM AND FORMATE
FILE 'CAPLUS' ENTERED AT 13:15:01 ON 19 MAR 2009
FILE 'REGISTRY' ENTERED AT 13:15:11 ON 19 MAR 2009
L4 2 S 59101-30-3/RN OR 53518-18-6/RN
FILE 'CAPLUS' ENTERED AT 13:16:40 ON 19 MAR 2009
S 59101-30-3/REG#
FILE 'REGISTRY' ENTERED AT 13:18:46 ON 19 MAR 2009
L5 1 S 59101-30-3/RN
FILE 'CAPLUS' ENTERED AT 13:18:47 ON 19 MAR 2009
L6 6 S L5
L7 56 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND (FORMIC O
L8 0 S IONIC AND L7
L9 55 S L7 NOT L6
L10 62 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND IONIC
L11 6 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND (IONIC LI
E WALKER ADAM JOHN/AU
L12 12 S E2 OR E3
L13 12 S L12 AND IONIC
L14 0 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND L13
S 59101-30-3/REG# AND L13
FILE 'REGISTRY' ENTERED AT 13:38:11 ON 19 MAR 2009
L15 1 S 59101-30-3/RN
FILE 'CAPLUS' ENTERED AT 13:38:11 ON 19 MAR 2009
L16 6 S L15
L17 1 S L16 AND L13
L18 0 S L10 AND L13
FILE 'REGISTRY' ENTERED AT 13:39:17 ON 19 MAR 2009
E DIMETHYLAMINOETHANOL/CN
E DIMETHYLAMINO ETHANOL/CN

L19 0 S C3H1101N1/MF
 L20 0 S C3H110N/MF
 L21 0 S C3H11NO/MF

FILE 'CAPLUS' ENTERED AT 13:42:24 ON 19 MAR 2009
 L22 2798 S DIMETHYLAMINOETHANOL

=> s 113 and 108-01-0
 REGISTRY INITIATED
 Substance data SEARCH and crossover from CAS REGISTRY in progress...
 Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

L24 6910 L23

L25 2 L13 AND L24

=> d 1 2 all

L25 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2007:619447 CAPLUS
 DN 147:33228
 ED Entered STN: 08 Jun 2007
 TI Use of hydroxylammonium salts as ionic liquid solvents for
 enzyme-catalyzed reactions
 IN Walker, Adam John
 PA Bionigs Limited, UK
 SO PCT Int. Appl., 38pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 CC 45-5 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
 Section cross-reference(s): 23

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2007063327	A1	20070607	WO 2006-GB4503	20061204
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM GB 2437726 A 20071107 GB 2006-24157 20061204 PRAI GB 2005-24700 A 20051203				

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2007063327	IPCI	C07C0239-10 [I,A]; C07C0239-12 [I,A]; C07C0239-00

[I,C*]; C07C0211-64 [I,A]; C07C0211-00 [I,C*]
 IPCR C07C0239-00 [I,C]; C07C0239-10 [I,A]; C07C0211-00
 [I,C]; C07C0211-64 [I,A]; C07C0239-12 [I,A]
 ECLA C07C239/10; C07C239/12
 GB 2437726 IPCI C07C0239-10 [I,A]; C07C0059-06 [I,A]; C07C0059-00
 [I,C*]; C07C0239-12 [I,A]; C07C0239-00 [I,C*];
 C07C0311-49 [I,A]; C07C0311-00 [I,C*]; C12P0001-00
 [I,A]; C12P0007-62 [I,A]
 IPCR C07C0239-00 [I,C]; C07C0239-10 [I,A]; C07C0059-00
 [I,C]; C07C0059-06 [I,A]; C07C0239-12 [I,A];
 C07C0311-00 [I,C]; C07C0311-49 [I,A]; C12P0001-00
 [I,C]; C12P0001-00 [I,A]; C12P0007-62 [I,C];
 C12P0007-62 [I,A]
 ECLA C07C239/10; C07C239/12
 OS MARPAT 147:33228
 AB An ionic liquid comprises cations of the formula R1R2R3N+-OR4,
 where R1, R2, R3 and R4 are each independently selected from hydrogen and
 hydrocarbyl, the ionic liquid containing $\leq 1\%$ of water. The
 ionic liqs. may be used as solvents for chemical or biochem.
 reactions, in particular, for enzyme-catalyzed reactions. Thus,
 N,N-diethylhydroxylammonium acetate (m.p. $< -20^\circ$, viscosity 12 cP
 at 25°, refractive index 1.414) was prepared by dissolving
 N,N-diethylhydroxylamine (90) and acetic acid (60.06 g) sep. in ethanol
 (250 mL each), and adding the acid solution dropwise to the amine solution over
 1 h, while cooling with ice and stirring.
 ST hydroxylammonium salt ionic liq solvent enzyme catalyzed
 reaction
 IT Solvents
 (organic; use of hydroxylammonium salts as ionic liquid solvents
 for enzyme-catalyzed reactions)
 IT Ionic liquids
 (use of hydroxylammonium salts as ionic liquid solvents for
 enzyme-catalyzed reactions)
 IT Enzymes, uses
 RL: CAT (Catalyst use); USES (Uses)
 (use of hydroxylammonium salts as ionic liquid solvents for
 enzyme-catalyzed reactions)
 IT Quaternary ammonium compounds, preparation
 RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP
 (Preparation); USES (Uses)
 (use of hydroxylammonium salts as ionic liquid solvents for
 enzyme-catalyzed reactions)
 IT 39004-71-2P, N,N-Diethylhydroxylammonium acetate 939384-89-1P
 939384-90-4P 939384-91-5P 939384-93-7P 939384-94-8P 939384-96-0P
 939384-97-1P
 RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP
 (Preparation); USES (Uses)
 (use of hydroxylammonium salts as ionic liquid solvents for
 enzyme-catalyzed reactions)
 IT 939384-92-6P
 RL: IMF (Industrial manufacture); NUU (Other use, unclassified); RCT
 (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (use of hydroxylammonium salts as ionic liquid solvents for
 enzyme-catalyzed reactions)
 IT 64-19-7, Acetic acid, reactions 75-75-2, Methanesulfonic acid 79-14-1,
 Glycolic acid, reactions 108-01-0, N,N-Dimethylethanolamine
 121-44-8, Triethylamine, reactions 127-09-3, Sodium acetate 1493-13-6,
 Triflic acid 3710-84-7, N,N-Diethylhydroxylamine 7647-01-0,
 Hydrochloric acid, reactions 7722-84-1, Hydrogen peroxide, reactions
 82113-65-3, Bis(trifluoromethylsulfonyl)imide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (use of hydroxylammonium salts as ionic liquid solvents for

enzyme-catalyzed reactions)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Anon
- (2) Anon
- (3) Anon
- (4) Anon
- (5) Anon
- (6) Anon
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- (19) Wehner Wolfgang; US 4578489 A 1986 CAPLUS

L25 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2005:1090138 CAPLUS

DN 143:386681

ED Entered STN: 12 Oct 2005

TI Ionic liquids containing protonated primary, secondary or tertiary ammonium ions

IN Walker, Adam John

PA The University of York, UK

SO Brit. UK Pat. Appl., 62 pp.

CODEN: BAXXDU

DT Patent

LA English

IC ICM C07C215-08

ICS C07C215-12; C07C217-30

CC 23-4 (Aliphatic Compounds)

Section cross-reference(s): 45

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2412912	A	20051012	GB 2005-6984	20050407
GB 2412912	B	20070711		
AU 2005232025	A1	20051020	AU 2005-232025	20050407
CA 2563458	A1	20051020	CA 2005-2563458	20050407
WO 2005097731	A2	20051020	WO 2005-GB1364	20050407
WO 2005097731	A3	20051124		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CN 1997620	A	20070711	CN 2005-80018219	20050407
EP 1805131	A2	20070711	EP 2005-735988	20050407

	R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
JP	2007532525	T 20071115 JP 2007-506841 20050407
MX	2006011531	A 20070326 MX 2006-11531 20061005
IN	2006KN03208	A 20070608 IN 2006-KN3208 20061103
KR	2007031302	A 20070319 KR 2006-723342 20061107
US	20070185330	A1 20070809 US 2007-599694 20070119
PRAI	GB 2004-7908	A 20040407
WO	2005-GB1364	W 20050407

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
GB 2412912	ICM	C07C215-08
	ICS	C07C215-12; C07C217-30
	IPCI	C07C0215-00 [I,C]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C]; C07C0217-30 [I,A]
	IPCR	C07C0215-00 [I,C]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0215-40 [I,A]; C07C0217-00 [I,C]; C07C0217-30 [I,A]
AU 2005232025	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]
	IPCR	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
CA 2563458	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	B01J0031-02 [I,A]; B01J0031-04 [I,A]; C07C0215-40 [I,A]; C07C0215-00 [I,C*]
	IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; B01J0031-02 [I,C]; B01J0031-02 [I,A]; B01J0031-04 [I,C]; B01J0031-04 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
WO 2005097731	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-00 [ICM,7]; C07C0215-40 [ICS,7]; B01J0031-04 [ICS,7]; B01J0031-02 [ICS,7]
	IPCR	C07C0215-00 [I,C*]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0215-40 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
CN 1997620	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-40 [I,A]; C07C0215-00 [I,C*]; B01J0031-04 [I,A]; B01J0031-02 [I,A]
	IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
EP 1805131	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-40 [I,A]; C07C0215-00 [I,C*]
	IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
JP 2007532525	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-40 [I,A]; C07C0215-00 [I,C*]; C07C0311-03 [I,A]; C07C0311-00 [I,C*]
	IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0311-03 [I,A]; C07C0311-00 [I,C]; C07C0311-03 [I,A]
MX 2006011531	FTERM	4H006/AA01; 4H006/AA03; 4H006/AB80
	IPCI	B01J0031-02 [I,C*]; B01J0031-04 [I,C*]; C07C0215-40 [I,A]; C07C0215-00 [I,C*]
IN 2006KN03208	IPCI	C07C0215-40 [ICM,7]; C07C0215-00 [ICS,7]
KR 2007031302	IPCI	C07C0215-40 [I,A]; C07C0215-00 [I,A]
US 20070185330	IPCI	C07C0215-02 [I,A]; C07C0215-00 [I,C*]; C07D0211-02 [I,A]; C07D0211-00 [I,C*]
	NCL	546/184.000; 564/281.000

OS MARPAT 143:386681

AB The present invention relates to ionic liqs. comprising an anion and a cation wherein the cation is a primary, secondary or tertiary ammonium ion containing a protonated nitrogen atom. The invention also provides processes for the manufacture of ionic liqs. For example, N,N-dimethylethanolammonium glycolate (I) was prepared by gradually adding glycolic acid to an alc. solution of N,N-dimethylethanolamine; after completion and neutralization, the cold alc. solution was filtered, solvent removed, then frozen in liquid nitrogen and lyophilized in vacuo. After gradually allowing the sample to warm to room temperature, 32.85 g (99% yield) of I as a pale yellow liquid was isolated. Preferred ionic liqs. contain ethanolammonium, diethanolammonium, N-butyldiethanolammonium, N,N-dimethylethanolammonium, N-methylethanolammonium, N,N-di(methoxyethyl)ammonium and 1-(3-hydroxypropyl)putrescinium ions as cations.

ST amine acid; ammonium ionic liq prepn; primary ammonium ion prepn
ionic liq; secondary ammonium ion prepn ionic liq;
tertiary ammonium ion prepn ionic liq

IT Oxidation
(enzymic; demonstration of application of ionic liqs. in
enzymic oxidation of methanol to formaldehyde)

IT Green chemistry
Ionic liquids
(preparation and methods for manufacture of ionic liqs. containing
protonated primary, secondary or tertiary ammonium ions)

IT Quaternary ammonium compounds, preparation
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN
(Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation and methods for manufacture of ionic liqs. containing
protonated primary, secondary or tertiary ammonium ions)

IT Acids, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and methods for manufacture of ionic liqs. containing
protonated primary, secondary or tertiary ammonium ions)

IT Solvents
(preparation and methods for manufacture of ionic liqs. containing
protonated primary, secondary or tertiary ammonium ions for use as
solvent in industrial and com. applications)

IT Amines, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(primary; preparation and methods for manufacture of ionic liqs. containing
protonated primary, secondary or tertiary ammonium ions)

IT Carboxylic acids, uses
Sulfonic acids, uses
RL: NUU (Other use, unclassified); USES (Uses)
(salts, anion component for ionic liquid; preparation and methods
for manufacture of ionic liqs. containing protonated primary,
secondary or tertiary ammonium ions)

IT Amines, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(secondary; preparation and methods for manufacture of ionic liqs.
containing protonated primary, secondary or tertiary ammonium ions)

IT Amines, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(tertiary; preparation and methods for manufacture of ionic liqs.
containing protonated primary, secondary or tertiary ammonium ions)

IT 56-14-4, Succinate, uses 57-60-3, Pyruvate, uses 63-36-5, Salicylate,
uses 71-47-6, Formate, uses 71-50-1, Acetate, uses 71-52-3, Hydrogen
carbonate, uses 72-03-7, Propanoate, uses 74-81-7, Octanoate, uses
113-21-3, Lactate, uses 126-44-3, Citrate, uses 142-42-7, Fumarate,
uses 149-61-1, Malate 150-43-6, uses 151-33-7, Hexanoate, uses
338-70-5, uses 461-55-2, Butanoate, uses 666-14-8, uses 766-76-7,

Benzoate, uses 769-61-9, Mandelate 3342-79-8, Nonanoate 3398-75-2, Decanoate 3715-17-1, Tartrate, uses 3812-32-6, Carbonate, uses 7563-37-3, Heptanoate 7631-42-7, Phenylacetate, uses 10023-74-2, Pentanoate, uses 12627-13-3, Silicate 14066-19-4, Hydrogen phosphate, uses 14066-20-7, Dihydrogen phosphate, uses 14265-44-2, Phosphate, uses 14477-72-6, Trifluoroacetate ion, uses 14797-55-8, Nitrate, uses 14808-79-8, Sulphate, uses 14874-70-5, Tetrafluoroborate 14996-02-2, Hydrogen sulfate, uses 16053-58-0, Methanesulfonate anion 16887-00-6, Chloride, uses 16919-18-9, Hexafluorophosphate 17121-12-9, Metaphosphate (P4O124-) 20461-54-5, Iodide, uses 20938-62-9, Pantothenate 24959-67-9, Bromide, uses 37181-39-8, Trifluoromethanesulfonate 41824-21-9, Crotonate 44864-55-3 45048-62-2 49681-69-8, Hydrogen tartrate, uses 59561-61-4 86848-98-8 86848-99-9 97901-86-5 98837-98-0 130434-58-1 328238-56-8 866621-22-9

RL: NUU (Other use, unclassified); USES (Uses)
(anion component for ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 176158-74-0P
RL: BSU (Biological study, unclassified); IMF (Industrial manufacture); NUU (Other use, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(biodegradn. anal. of ionic liquid; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 20740-76-5 22852-66-0, Ethanolamine conjugate acid 26265-71-4 36833-63-3 36833-64-4 65591-62-0 90578-97-5 866567-32-0 866567-33-1 866567-34-2

RL: NUU (Other use, unclassified); USES (Uses)
(cation component for ionic liquid; preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 67-56-1, Methanol, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(demonstration of application of ionic liqs. in enzymic oxidation of methanol to formaldehyde)

IT 50-00-0P, Formaldehyde, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(demonstration of application of ionic liqs. in enzymic oxidation of methanol to formaldehyde)

IT 2471-06-9P 2604-13-9P 2805-17-6P 3178-20-9P 4337-66-0P 5988-51-2P 7487-79-8P 16530-72-6P 16830-40-3P 17618-31-4P 17618-32-5P 17863-38-6P 18394-23-5P 20261-59-0P 20475-13-2P 20748-72-5P 21829-52-7P 23251-72-1P, Diethanolamine acetate 23349-61-3P 25859-29-4P 26764-31-8P 28098-03-5P 28129-21-7P, Diethanolamine hydrobromide 29194-47-6P 29867-71-8P 29867-72-9P 29867-75-2P 29868-00-6P 29868-01-7P 29870-14-2P 29870-15-3P 29870-18-6P 29870-19-7P 29870-25-5P 29870-26-6P 29870-27-7P 29870-29-9P 30718-92-4P 30933-06-3P 31086-83-6P 31889-13-1P 35423-90-6P 38491-11-1P 38739-74-1P 49753-18-6P 49753-20-0P 51264-32-5P 51276-44-9P 53226-35-0P 53562-95-1P 53926-87-7P 54300-24-2P 55756-39-3P 56409-18-8P 56669-87-5P 57117-29-0P 58937-21-6P 59101-30-3P 59866-70-5P 60395-28-0P 62036-98-0P 63517-71-5P 63517-72-6P 64601-03-2P 64601-04-3P 64601-14-5P 67303-52-0P 67384-57-0P 68141-00-4P 68141-46-8P 68391-54-8P, Diethanolamine formate 68568-51-4P 68815-69-0P 68833-69-2P 68860-57-1P 68945-90-4P 69362-00-1P 69362-01-2P 75478-96-5P 76786-90-4P 77534-69-1P 77534-73-7P 79266-74-3P 82801-62-5P 84110-42-9P 84145-30-2P 84145-60-8P 84176-56-7P 86683-38-7P 86683-39-8P 88331-27-5P 89855-93-6P 90000-02-5P 90434-46-1P 93882-26-9P 93882-27-0P 93942-28-0P 93942-29-1P 95332-67-5P

98005-86-8P	98837-33-3P	101901-23-9P	103079-19-2P	108067-35-2P
109962-24-5P	111318-69-5P	116033-27-3P	117472-14-7P	126050-30-4P
134227-25-1P	135691-53-1P	137360-57-7P	138036-64-3P	156814-01-6P
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866567-72-8P	866567-73-9P	866567-74-0P	866567-75-1P	866567-76-2P
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866567-92-2P	866567-93-3P	866567-94-4P	866567-95-5P	866567-96-6P
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866568-43-6P				

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN
(Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation and methods for manufacture of ionic liqs. containing
protonated primary, secondary or tertiary ammonium ions)

IT	866568-44-7P	866568-45-8P	866568-46-9P	866568-47-0P	866568-48-1P
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	866568-69-6P	866568-70-9P	866568-71-0P	866568-72-1P	866568-74-3P
	866568-75-4P	866568-76-5P	866568-78-7P	866568-79-8P	866568-80-1P
	866568-81-2P	866568-82-3P	866568-83-4P	866568-84-5P	866568-85-6P
	866568-86-7P	866568-87-8P	866568-88-9P	866568-89-0P	866568-90-3P
	866568-91-4P	866568-92-5P	866568-94-7P	866568-96-9P	866568-98-1P
	866569-00-8P	866569-01-9P	866569-02-0P	866569-03-1P	866569-04-2P
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	866569-15-5P	866569-16-6P	866569-17-7P	866569-18-8P	866569-19-9P
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	866569-96-2P	866569-97-3P	866569-98-4P	866569-99-5P	866570-00-5P
	866570-01-6P	866570-02-7P	866570-03-8P	866570-04-9P	866570-05-0P

FILE 'REGISTRY' ENTERED AT 12:58:22 ON 19 MAR 2009
 E N,N-DIMETHYLETHANOLAMMONIUM FORMATE/CN
 E E2
 L1 1 S E3

FILE 'CAPLUS' ENTERED AT 13:01:52 ON 19 MAR 2009
 L2 1 S US20070185330/PN
 L3 2 S DIMETHYLETHANOLAMMONIUM AND FORMATE

FILE 'CAPLUS' ENTERED AT 13:15:01 ON 19 MAR 2009

FILE 'REGISTRY' ENTERED AT 13:15:11 ON 19 MAR 2009
 L4 2 S 59101-30-3/RN OR 53518-18-6/RN

FILE 'CAPLUS' ENTERED AT 13:16:40 ON 19 MAR 2009
 S 59101-30-3/REG#

FILE 'REGISTRY' ENTERED AT 13:18:46 ON 19 MAR 2009
 L5 1 S 59101-30-3/RN

FILE 'CAPLUS' ENTERED AT 13:18:47 ON 19 MAR 2009
 L6 6 S L5
 L7 56 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND (FORMIC O
 L8 0 S IONIC AND L7
 L9 55 S L7 NOT L6
 L10 62 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND IONIC
 L11 6 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND (IONIC LI
 E WALKER ADAM JOHN/AU
 L12 12 S E2 OR E3
 L13 12 S L12 AND IONIC
 L14 0 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND L13
 S 59101-30-3/REG# AND L13

FILE 'REGISTRY' ENTERED AT 13:38:11 ON 19 MAR 2009
 L15 1 S 59101-30-3/RN

FILE 'CAPLUS' ENTERED AT 13:38:11 ON 19 MAR 2009
 L16 6 S L15
 L17 1 S L16 AND L13
 L18 0 S L10 AND L13

FILE 'REGISTRY' ENTERED AT 13:39:17 ON 19 MAR 2009
 E DIMETHYLAMINOETHANOL/CN
 E DIMETHYLAMINO ETHANOL/CN
 L19 0 S C3H11O1N1/MF
 L20 0 S C3H11ON/MF
 L21 0 S C3H11NO/MF

FILE 'CAPLUS' ENTERED AT 13:42:24 ON 19 MAR 2009
 L22 2798 S DIMETHYLAMINOETHANOL
 S L13 AND 108-01-0/REG#

FILE 'REGISTRY' ENTERED AT 13:44:06 ON 19 MAR 2009
 L23 1 S 108-01-0/RN

FILE 'CAPLUS' ENTERED AT 13:44:06 ON 19 MAR 2009
 L24 6910 S L23
 L25 2 S L13 AND L24

=> s 108-01-0 and (ionic liquid#)

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...

Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

L27 6910 L26

304581 IONIC
980632 LIQUID#
13902 IONIC LIQUID#
(IONIC(W)LIQUID#)
L28 21 L27 AND (IONIC LIQUID#)

=> d 1-21 all

L28 ANSWER 1 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2008:1201688 CAPLUS
DN 149:500958
ED Entered STN: 07 Oct 2008
TI Density, viscosity and electrical conductivity of
1-butyl-3-methylimidazolium hexafluorophosphate + monoethanolamine and +
N, N-dimethylethanolamine
AU Geng, Yanfang; Chen, Siliu; Wang, Tengfang; Yu, Dahong; Peng, Changjun;
Liu, Honglai; Hu, Ying
CS Lab for Advanced Material and Department of Chemistry, East China
University of Science and Technology, Shanghai, 200237, Peop. Rep. China
SO Journal of Molecular Liquids (2008), 143(2-3), 100-108
CODEN: JMLIDT; ISSN: 0167-7322
PB Elsevier B.V.
DT Journal
LA English
CC 68-6 (Phase Equilibriums, Chemical Equilibriums, and Solutions)
Section cross-reference(s): 69, 76
AB Densities, viscosities and elec. conductivities of ionic liquid
1-butyl-3-methylimidazolium hexafluorophosphate ([C4mim][PF6]) in
monoethanolamine (MEA) and N,N-dimethylethanolamine (DMEA) have been determined
from (288.15 to 323.15) K. The results show that the densities of both
binary mixts. linearly decrease with increasing temperature. The dependence of
temperature on the viscosity has been fitted to the Arrhenius equation with
high precision. A viscosity model based on the equation of state for
chain-like fluids and a solute aggregation model were used to calculate the
viscosity of binary mixture. The dependence of temperature on the elec.
conductivity has also been fitted in the form of Arrhenius equation. The effect of
concentration of ionic liquid on the elec. conductivity has been examined using the Walden
rule.
Excess molar volumes and viscosity deviations from a mole fraction average
have been obtained and fitted to the Redlich-Kister equation.
ST butylmethylimidazolium fluorophosphate monoethanolamine
dimethylethanolamine binary mixt physicochem properties
IT Liquid mixtures
(binary; physicochem. properties of butylmethylimidazolium
hexafluorophosphate binary mixts. with monoethanolamine and
dimethylethanolamine)
IT Activation energy

(elec.-conductivity; physicochem. properties of butylmethylimidazolium hexafluorophosphate binary mixts. with monoethanolamine and dimethylethanolamine)

IT Molar volume
(excess; physicochem. properties of butylmethylimidazolium hexafluorophosphate binary mixts. with monoethanolamine and dimethylethanolamine)

IT Density
Electric conductivity
Ionic liquids
Molar conductance
Viscosity
(physicochem. properties of butylmethylimidazolium hexafluorophosphate binary mixts. with monoethanolamine and dimethylethanolamine)

IT 108-01-0, N,N-Dimethylethanolamine 141-43-5, Monoethanolamine, properties 174501-64-5, 1-Butyl-3-methylimidazolium hexafluorophosphate
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(physicochem. properties of butylmethylimidazolium hexafluorophosphate binary mixts. with monoethanolamine and dimethylethanolamine)

RE.CNT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

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L28 ANSWER 2 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2008:856974 CAPLUS

DN 149:175904

ED Entered STN: 17 Jul 2008

TI Environmentally-friendly quaternary ammonium salts as ionic liquids having low melting point and low viscosity

IN Ono, Hiroyuki; Fukaya, Yukinobu; Iizuka, Yuki

PA Tokyo University of Agriculture & Technology, Japan

SO Jpn. Kokai Tokkyo Koho, 8pp.

CODEN: JKXXAF

DT Patent

LA Japanese

CC 23-4 (Aliphatic Compounds)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2008162899	A	20080717	JP 2006-350995	20061227
PRAI	JP 2006-350995		20061227		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2008162899	IPCI	C07C0215-40 [I,A]; C07C0215-00 [I,C*]; C07C0057-145 [I,A]; C07C0057-00 [I,C*]; C07C0055-10 [I,A]; C07C0055-00 [I,C*]; C07C0059-06 [I,A]; C07C0059-00 [I,C*]; C07C0053-08 [I,A]; C07C0053-00 [I,C*]
	FTERM	4H006/AA01; 4H006/AB80; 4H006/BN10; 4H006/BS10; 4H006/BU30

OS CASREACT 149:175904; MARPAT 149:175904

AB R1R2R3N+CH2CH2OH Y- (R1-R3 = H, C1-3 alkyl; Y = biol.-relevant carboxylate anion) are liquid at ≤90° and are useful as electrolytes, solvents, solubilizers for drugs, etc. Thus, toluene solution of Me2NCH2CH2OH was treated with MeI at 0° for 12 h to give choline iodide, which was dissolved in H2O and passed through a column packed with Amberlite IRA 78 to give choline hydroxide. This was treated with maleic acid at 0° for 12 h to give choline maleate having m.p. 24°.

ST hydroxyethyl quaternary ammonium biol carboxylate prepn ionic liq; choline maleate prepn low melting point ionic liq

IT Ionic liquids

(preparation of (hydroxyethyl)quaternary ammonium biol.-relevant carboxylic acid salts as environmentally-friendly quaternary ammonium salts as ionic liqs. having low m.p. and low viscosity)

IT Quaternary ammonium compounds, preparation

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of (hydroxyethyl)quaternary ammonium biol.-relevant carboxylic acid salts as environmentally-friendly quaternary ammonium salts as ionic liqs. having low m.p. and low viscosity)

IT 64-19-7, Acetic acid, reactions 79-14-1, Glycolic acid, reactions

108-01-0, N,N-Dimethylethanolamine 110-15-6, Succinic acid,

reactions 110-16-7, Maleic acid, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of (hydroxyethyl)quaternary ammonium biol.-relevant carboxylic acid salts as environmentally-friendly quaternary ammonium salts as

ionic liqs. having low m.p. and low viscosity)
 IT 17773-10-3P, Choline iodide
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of (hydroxyethyl)quaternary ammonium biol.-relevant carboxylic acid salts as environmentally-friendly quaternary ammonium salts as ionic liqs. having low m.p. and low viscosity)
 IT 51-84-3P, Choline acetate, preparation 125677-68-1P 143896-90-6P 1039762-54-3P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (preparation of (hydroxyethyl)quaternary ammonium biol.-relevant carboxylic acid salts as environmentally-friendly quaternary ammonium salts as ionic liqs. having low m.p. and low viscosity)
 IT 65-85-0D, Benzoic acid, (hydroxyethyl)quaternary ammonium salts 79-09-4D, Propionic acid, (hydroxyethyl)quaternary ammonium salts
 RL: TEM (Technical or engineered material use); USES (Uses)
 (preparation of (hydroxyethyl)quaternary ammonium biol.-relevant carboxylic acid salts as environmentally-friendly quaternary ammonium salts as ionic liqs. having low m.p. and low viscosity)

L28 ANSWER 3 OF 21 CAPLUS COPYRIGHT 2009 ACS ON STN

AN 2008:24948 CAPLUS

DN 148:247365

ED Entered STN: 08 Jan 2008

TI Phase Equilibria and Modeling of Ammonium Ionic Liquid , C2NTf2, Solutions

AU Domanska, Urszula; Marciniak, Andrzej; Krolikowski, Marek

CS Physical Chemistry Division, Faculty of Chemistry, Warsaw University of Technology, Warsaw, 00-664, Pol.

SO Journal of Physical Chemistry B (2008), 112(4), 1218-1225

CODEN: JPCBFK; ISSN: 1520-6106

PB American Chemical Society

DT Journal

LA English

CC 68-1 (Phase Equilibria, Chemical Equilibria, and Solutions)

Section cross-reference(s): 23, 65, 69

AB Novel quaternary ammonium ionic liquid, ethyl(2-hydroxyethyl)dimethylammonium bis(trifluoromethylsulfonyl)imide (C2NTf2), has been prepared from N,N-dimethylethanolamine as a substrate. The paper includes a specific basic characterization of the synthesized compound by NMR and the basic thermophys. properties: the m.p., enthalpy of fusion, enthalpy of solid-solid phase transition, glass transition determined by the differential scanning calorimetry (DSC), temperature of decomposition,

and

water content. The d. of the new compound was measured. The solid-liquid or liquid-liquid phase equilibrium of binary mixts. containing C2NTf2 + water or propan-1-ol, butan-1-ol, hexan-1-ol, octan-1-ol, decan-1-ol, benzene, toluene, hexane, octane, DMSO, and THF were measured by a dynamic method in a wide range of temps. from 230 to 430 K. These data were correlated by means of the nonrandom two-liquid (NRTL) equation utilizing temperature-dependent parameters derived from the solid-liquid or liquid-liquid equilibrium

From the solubility results, the neg. value of the partition coefficient of ionic

liquid in binary system octan-1-ol/water (log D) at 298.15 K has been calculated

ST ethylhydroxyethylidimethylammonium salt prepn characterization; org solvent water ethylhydroxyethylidimethylammonium salt binary mixt phase equil

IT Quaternary ammonium compounds, properties

RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(alkyl; ethyl(hydroxyethyl)dimethylammonium bis(trifluoromethylsulfonyl)imide preparation, characterization and phase equilibrium in its binary mixture with water and organic solvents)

IT Glass transition
 Ionic liquids
 Liquid-liquid equilibrium
 Partition
 Phase composition
 Phase transition enthalpy
 Solid-liquid equilibrium
 Solubility
 Thermal decomposition
 (ethyl(hydroxyethyl)dimethylammonium bis(trifluoromethylsulfonyl)imide preparation, characterization and phase equilibrium in its binary mixture with water and organic solvents)

IT Alkanes, properties
 Benzenoids
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
 (ethyl(hydroxyethyl)dimethylammonium bis(trifluoromethylsulfonyl)imide preparation, characterization and phase equilibrium in its binary mixture with water and organic solvents)

IT Solvents
 (organic; ethyl(hydroxyethyl)dimethylammonium bis(trifluoromethylsulfonyl)imide preparation, characterization and phase equilibrium in its binary mixture with water and organic solvents)

IT Alcohols, properties
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
 (primary; ethyl(hydroxyethyl)dimethylammonium bis(trifluoromethylsulfonyl)imide preparation, characterization and phase equilibrium in its binary mixture with water and organic solvents)

IT 67-68-5, DMSO, properties 71-23-8, 1-Propanol, properties 71-36-3, 1-Butanol, properties 71-43-2, Benzene, properties 108-88-3, Toluene, properties 109-99-9, THF, properties 110-54-3, Hexane, properties 111-27-3, 1-Hexanol, properties 111-65-9, Octane, properties 111-87-5, 1-Octanol, properties 112-30-1, 1-Decanol
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
 (ethyl(hydroxyethyl)dimethylammonium bis(trifluoromethylsulfonyl)imide preparation, characterization and phase equilibrium in its binary mixture with water and organic solvents)

IT 854102-71-9P
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
 (ethyl(hydroxyethyl)dimethylammonium bis(trifluoromethylsulfonyl)imide preparation, characterization and phase equilibrium in its binary mixture with water and organic solvents)

IT 74-96-4, Ethyl bromide 108-01-0, N,N-Dimethylethanolamine 90076-65-6, Lithium bis(trifluoromethanesulfonyl)imide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (starting material in preparation of ethyl(hydroxyethyl)dimethylammonium bis(trifluoromethylsulfonyl)imide)

RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
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L28 ANSWER 4 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2007:1484110 CAPLUS

DN 148:144204

ED Entered STN: 31 Dec 2007

TI Process for preparation of ionic liquids with halides
as anions

IN Zhang, Yumei; Wang, Huaping; Zhang, Hongyan; Liu, Weiwei; Wang, Qianghua

PA Donghua University, Peop. Rep. China

SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 9pp.

CODEN: CNXXEV

DT Patent

LA Chinese

CC 21-2 (General Organic Chemistry)

Section cross-reference(s): 45

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 101092399	A	20071226	CN 2007-10039356	20070411
PRAI	CN 2007-10039356		20070411		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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CN 101092399 IPCI C07D0233-58 [I,A]; C07D0233-00 [I,C*]; C07D0231-12 [I,A]; C07D0231-00 [I,C*]; C07D0213-20 [I,A]; C07D0213-00 [I,C*]; C07C0211-63 [I,A]; C07C0211-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-00 [I,C*]; C07F0009-54 [I,A]; C07F0009-00 [I,C*]
 IPCR C07D0233-00 [I,C]; C07D0233-58 [I,A]

OS CASREACT 148:144204; MARPAT 148:144204

AB The method comprises (1) mixing an amine, phosphine, or sulfide compound with halogenated hydrocarbon at a molar ratio of 1:1.0-1:1.05; (2) allowing to react in reactor at 0.105-0.25 MPa and room temperature-150°C for 0.5-20 h under aerating inert gas, decompressing to normal pressure, cooling, extracting with 1/5-4/5 volume times Et acetate for 2-3 times, distilling at 40-80°C at reduced pressure. The method has advantages of rapid reaction, short time, low cost, no pollution to environment, and can be used in laboratory synthesis and industrial production With the method, the prepared ionic liqs. can be used as solvent in organic reaction and polymerization reaction, and also used in chemical separation and electrochem. field.

ST ionic liq halide anion prepn ammonium phosphonium

IT Hydrocarbons, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (halo; preparation of ionic liqs. with halides as anions)

IT Ionic liquids
 (preparation of ionic liqs. with halides as anions)

IT Halides
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
 (preparation of ionic liqs. with halides as anions)

IT 4086-73-1P 4317-07-1P 13028-69-8P 65039-08-9P 65039-10-3P 79917-90-1P 85100-77-2P 108864-31-9P 1001438-14-7P 1001438-15-8P
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
 (preparation of ionic liqs. with halides as anions)

IT 74-96-4 96-54-8, N-Methylpyrrole 107-05-1, Allyl chloride 108-01-0, Dimethylethanolamine 109-65-9, 1-Bromobutane 109-69-3, 1-Chlorobutane 110-86-1, Pyridine, reactions 111-85-3, 1-Chlorooctane 121-44-8, Triethylamine, reactions 554-70-1, Triethylphosphine 616-47-7, N-Methylimidazole 930-36-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of ionic liqs. with halides as anions)

L28 ANSWER 5 OF 21 CAPLUS COPYRIGHT 2009 ACS ON STN

AN 2007:1252115 CAPLUS

DN 148:223050

ED Entered STN: 05 Nov 2007

TI Solvent extraction of U(VI) by task specific ionic liquids bearing phosphoryl groups

AU Ouadi, Ali; Klimchuk, Olga; Gaillard, Clotilde; Billard, Isabelle

CS Institut Pluridisciplinaire Hubert Curien, DRS, ULP, CNRS, IN2P3, Strasbourg, 67037, Fr.

SO Green Chemistry (2007), 9(11), 1160-1162
 CODEN: GRCHFJ; ISSN: 1463-9262

PB Royal Society of Chemistry

DT Journal

LA English

CC 68-2 (Phase Equilibriums, Chemical Equilibriums, and Solutions)

OS CASREACT 148:223050

AB A novel class of hydrophobic ionic liqs. based on quaternary ammonium cation and bearing phosphoryl groups was synthesized. The preliminary results of U(VI) extraction from aqueous solution into the ionic liquid are presented.

ST uranyl extn phosphoryl ammonium ionic liq
 IT Quaternary ammonium compounds, properties
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);
 PROC (Process)
 (alkyl; uranyl solvent extraction of U(VI) by task specific ionic liqs.
 bearing phosphoryl groups)
 IT Ionic liquids
 Partition
 Solvent extraction
 (uranyl solvent extraction of U(VI) by task specific ionic liqs. bearing
 phosphoryl groups)
 IT 16637-16-4, Uranyl ion(2+) 258273-75-5
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);
 PROC (Process)
 (uranyl solvent extraction of U(VI) by task specific ionic liqs. bearing
 phosphoryl groups)
 IT 1005000-61-2P 1005000-62-3P
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN
 (Synthetic preparation); PREP (Preparation); PROC (Process)
 (uranyl solvent extraction of U(VI) by task specific ionic liqs. bearing
 phosphoryl groups)
 IT 108-01-0, 2-(Dimethylamino)ethanol 109-55-7,
 3-(Dimethylamino)-1-propylamine 682-76-8, Dibutyl vinylphosphonate
 819-43-2, Dibutyl chlorophosphate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (uranyl solvent extraction of U(VI) by task specific ionic liqs. bearing
 phosphoryl groups)
 IT 1013924-26-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (uranyl solvent extraction of U(VI) by task specific ionic liqs. bearing
 phosphoryl groups)

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L28 ANSWER 6 OF 21 CAPLUS COPYRIGHT 2009 ACS ON STN
 AN 2007:1231612 CAPLUS

DN 147:553189

ED Entered STN: 31 Oct 2007

TI Electrochemical-probe type humidity sensor based on room temperature
 ionic liquid

IN Wang, Rong; Zhu, Guoyang

PA Shanghai Normal University, Peop. Rep. China
 SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 47pp.
 CODEN: CNXXEV
 DT Patent
 LA Chinese
 CC 79-2 (Inorganic Analytical Chemistry)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 101059476	A	20071024	CN 2007-10041409	20070529
PRAI	CN 2007-10041409		20070529		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
CN 101059476	IPC1	G01N0027-403 [I,A]; G01N0027-26 [I,A]
	IPCR	G01N0027-403 [I,C]; G01N0027-403 [I,A]

AB The title humidity sensor includes a humidity-sensitive material containing room temperature ionic liquid, at least two electrodes (metal electrodes, carbon electrodes or semiconductor electrodes), an electrochem. probe with an reversible oxidation-reduction pair as component, a power supply, a galvanometer, a signal circuit, and an ionic liquid carrier; wherein the oxidation-reduction pair

is dissolved in ionic liquid and selected from tetracyanoquinodimethane, N,N,N',N'-tetramethyl-p-phenylenediamine or benzoquinone, ferrocene, potassium ferricyanide, etc., and derivs. thereof; and the room temperature ionic liquid is selected from alkylimidazole, alkylpyridine, quaternary ammonium salt, quaternary phosphonium salt, or benzimidazole ionic liqs. The inventive humidity sensor has the advantages of stable performance, high sensitivity, simple structure, and low cost.

ST humidity sensor electrochem probe ionic liq
 IT Electric current
 Electrochemistry
 Gas analysis
 Humidity
 Hygrometers
 Ionic liquids
 (electrochem.-probe type humidity sensor based on room temperature ionic liquid)
 IT Phosphonium compounds
 Pyridinium compounds
 Quaternary ammonium compounds, uses
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (electrochem.-probe type humidity sensor based on room temperature ionic liquid)
 IT Metalloporphyrins
 RL: TEM (Technical or engineered material use); USES (Uses)
 (electrochem.-probe type humidity sensor based on room temperature ionic liquid)
 IT Onium compounds
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (imidazolium compds.; electrochem.-probe type humidity sensor based on room temperature ionic liquid)
 IT 143314-16-3P, 1-Ethyl-3-methylimidazolium tetrafluoroborate
 174501-64-5P, 1-Butyl-3-methyl imidazolium hexafluorophosphate
 186088-50-6P, N-Butylpyridinium hexafluorophosphate 203389-28-0P,
 N-Butylpyridinium tetrafluoroborate 244193-56-4P,
 1-Decyl-3-methylimidazolium tetrafluoroborate 324575-10-2P
 384347-07-3P 547718-93-4P 849223-61-6P 849223-64-9P 855788-71-5P

956699-79-9P 956699-81-3P 956699-82-4P 956699-83-5P 956699-85-7P
 956699-86-8P 956699-87-9P 956700-18-8P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (electrochem.-probe type humidity sensor based on room temperature ionic liquid)
 IT 74-88-4, Iodo methane, reactions 74-96-4, Bromoethane 75-75-2, Methanesulfonic acid 102-71-6, Triethanolamine, reactions 104-15-4, p-Methyl benzene sulfonic acid, reactions 108-01-0, N, N-Dimethyl ethanolamine 109-65-9, 1-Bromobutane 110-86-1, Pyridine, reactions 111-42-2, Diethanolamine, reactions 111-83-1, 1-Bromooctane 112-29-8, 1-Bromodecane 112-71-0, 1-Bromotetradecane 616-47-7, N-Methyl imidazole 998-40-3 1120-71-4, 1, 3-Propane sultone 1493-13-6, Trifluoromethanesulfonic acid 1633-83-6, 1,4-Butane sultone 7035-68-9, 1-Ethyl benzimidazole 7664-93-9, Sulfuric acid, reactions 16872-11-0, Tetrafluoroboric acid 17084-13-8, Potassium hexafluorophosphate 90076-65-6, Lithium bis(trifluoromethane sulfonylimide)
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (electrochem.-probe type humidity sensor based on room temperature ionic liquid)
 IT 874-80-6P, N-Butyl pyridinium bromide 1702-42-7P, Tributylmethylphosphonium iodide 2534-66-9P, N-Octyl pyridinium bromide 3115-68-2P, Tetrabutylphosphonium bromide 15193-40-5P, Tributyltetradecylphosphonium bromide 38880-58-9P 65039-08-9P, 1-Ethyl-3-methyl imidazolium bromide 80297-71-8P 85100-77-2P, 1-Butyl-3-methyl imidazolium bromide 188589-32-4P, 1-Decyl-3-methylimidazolium bromide 288322-16-7P 849223-59-2P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (electrochem.-probe type humidity sensor based on room temperature ionic liquid)
 IT 100-22-1, N,N,N',N'-Tetramethyl p-phenylene diamine 102-54-5, Ferrocene 106-51-4, 1,4-Benzoquinone, uses 574-93-6, Phthalocyanine 1518-16-7 7440-44-0, Carbon, uses 13746-66-2, Potassium ferricyanide 956699-78-8
 RL: TEM (Technical or engineered material use); USES (Uses)
 (electrochem.-probe type humidity sensor based on room temperature ionic liquid)

L28 ANSWER 7 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2007:1218237 CAPLUS
 DN 147:541494
 ED Entered STN: 29 Oct 2007
 TI Process for preparation of ionic liquids having two functional groups
 IN Wang, Rong; Zhu, Guoyang; Liu, Guohua; Wu, Xiaqin; Dai, Liyi
 PA Shanghai Normal University, Peop. Rep. China
 SO Faming Zhuanli Shengqing Gongkai Shuomingshu, 14pp.
 CODEN: CNXXEV
 DT Patent
 LA Chinese
 CC 23-4 (Aliphatic Compounds)
 Section cross-reference(s): 45

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 101058552	A	20071024	CN 2006-10025808	20060418
PRAI	CN 2006-10025808		20060418		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
CN 101058552	IPCI	C07C0309-02 [I,A]; C07C0309-00 [I,C*]; C07C0303-02

[I,A]; C07C0303-00 [I,C*]
 IPCR C07C0309-00 [I,C]; C07C0309-02 [I,A]
 OS CASREACT 147:541494; MARPAT 147:541494
 AB This invention pertains to a method for producing ionic liqs. having two functional groups with general formula of $R_1R_2(R_3OCH_2CH_2)N+(CH_2)3SO_3H\cdot R_4SO_3^-$ [wherein R_1 and R_2 = independently H, alkyl, aryl, etc.; R_3 = H, (un)substituted alkyl, or aryl; R_4 = alkyl, alkenyl, aryl, heteroaryl, or OH]. The preparation of title ionic liquid comprises reacting hydroxyalkylamine or its derivs. with sultone to obtain corresponding inner salt compds., then mixing with organic acid or inorg. acid at molar ratio of 1: 1 at 50-85 °C, and vacuum drying to obtain the product. The title ionic liquid has stability in water and atmospheric, moderate viscosity, low cost, and can be used widely in catalysis and extraction, and can be modified or solidified further by inducing hydroxy and sulfonic groups.
 ST ammonium sulfonic acid prepn ionic liq
 IT Ionic liquids
 (preparation of ionic liqs. having two functional groups)
 IT 38880-58-9P 43192-68-3P 80297-71-8P 88992-91-0P 956719-65-6P
 956719-75-8P 956719-80-5P
 RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of ionic liqs. having two functional groups)
 IT 956699-81-3P 956699-82-4P 956699-83-5P 956699-85-7P 956699-86-8P
 956699-87-9P 956719-62-3P 956719-69-0P 956719-73-6P 956719-78-1P
 956719-83-8P
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
 (preparation of ionic liqs. having two functional groups)
 IT 68-11-1, reactions 75-75-2, Methanesulfonic acid 79-10-7, 2-Propenoic acid, reactions 102-71-6, reactions 104-15-4, Tonic acid, reactions 107-99-3 108-01-0 108-95-2, Phenol, reactions 111-42-2, reactions 1120-71-4 1493-13-6, Trifluoromethanesulfonic acid 1633-83-6
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of ionic liqs. having two functional groups)
 IT 7664-93-9, Sulfuric acid, reactions
 RL: RGT (Reagent); RACT (Reactant or reagent)
 (preparation of ionic liqs. having two functional groups)

L28 ANSWER 8 OF 21 CAPLUS COPYRIGHT 2009 ACS ON STN
 AN 2007:1217631 CAPLUS
 DN 147:553183
 ED Entered STN: 29 Oct 2007
 TI Amperometric humidity sensing device based on room-temperature ionic liquid
 IN Wang, Rong; Zhu, Guoyang
 PA Shanghai Normal University, Peop. Rep. China
 SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 48pp.
 CODEN: CNXXEV
 DT Patent
 LA Chinese
 CC 79-2 (Inorganic Analytical Chemistry)
 Section cross-reference(s): 59

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	CN 101059475	A	20071024	CN 2007-10041408	20070529
FRAI	CN 2007-10041408		20070529		
CLASS					
	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES		

CN	101059475	IPCI	G01N0027-403 [I,A]; G01N0027-26 [I,A]
		IPCR	G01N0027-403 [I,C]; G01N0027-403 [I,A]

AB The title amperometric humidity sensing device comprises a humidity-sensing element having a room-temperature ionic liquid and an electrochem. probe, a signal amplification circuit, a detection loop, a reference loop, a gas system, and display controlling system, wherein humidity is detected by charge current of the humidity-sensing element and reaction current of the electrochem. probe. The room-temperature ionic liquid can be

one or more selected from alkylimidazole, alkylpyridine, quaternary ammonium salt, quaternary phosphonium salt, and benzimidazole ionic liqs. The electrochem. probe can be redox pair, such as tetramethyl-p-phenylenediamine, benzoquinone, ferrocene, etc., and derivative thereof, dissolved in the room-temperature ionic liquid. The inventive amperometric humidity sensing device has simple structure, good interference resistance, large responding signal linear range, good interchangeability, low cost, stable performance, and high sensitivity.

ST amperometric humidity sensing device ionic liq

IT Sulfonic acids, uses
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (alkanesulfonic, salts; amperometric humidity sensor based on room-temperature ionic liquid)

IT Electric current
 Electrochemistry
 Gas analysis
 Humidity
 Hygrometers
 Ionic liquids
 (amperometric humidity sensor based on room-temperature ionic liquid)

IT Phosphonium compounds
 Pyridinium compounds
 Quaternary ammonium compounds, uses
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (amperometric humidity sensor based on room-temperature ionic liquid)

IT Metallophthalocyanines
 Metalloporphyrins
 RL: TEM (Technical or engineered material use); USES (Uses)
 (amperometric humidity sensor based on room-temperature ionic liquid)

IT Onium compounds
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (imidazolium compds.; amperometric humidity sensor based on room-temperature ionic liquid)

IT 100-22-1, N,N,N,N'-Tetramethyl p-phenylene diamine 102-54-5, Ferrocene 106-51-4, 1,4-Benzoquinone, analysis 1518-16-7 13746-66-2, Potassium ferricyanide 13943-58-3, Potassium ferrocyanide 956699-78-8
 RL: ARU (Analytical role, unclassified); PRP (Properties); ANST (Analytical study)
 (amperometric humidity sensor based on room-temperature ionic liquid)

IT 143314-16-3P, 1-Ethyl-3-methylimidazolium tetrafluoroborate 174501-64-5P, 1-Butyl-3-methyl imidazolium hexafluorophosphate 186088-50-6P, N-Butylpyridinium hexafluorophosphate 203389-28-0P, N-Butylpyridinium tetrafluoroborate 244193-56-4P, 1-Decyl-3-methylimidazolium tetrafluoroborate 324575-10-2P
 384347-07-3P 547718-93-4P 849223-61-6P 849223-64-9P 855788-71-5P
 956699-79-9P 956699-81-3P 956699-82-4P 956699-83-5P 956699-85-7P
 956699-86-8P 956699-87-9P 956699-88-0P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(amperometric humidity sensor based on room-temperature ionic liquid)

IT 74-88-4, Iodo methane, reactions 74-96-4, Bromoethane 75-75-2, Methanesulfonic acid 102-71-6, Triethanolamine, reactions 104-15-4, p-Methyl benzene sulfonic acid, reactions 108-01-0, N, N-Dimethyl ethanolamine 109-65-9, 1-Bromo-butane 110-86-1, Pyridine, reactions 111-42-2, Diethanolamine, reactions 111-83-1, 1-Bromo-octane 112-29-8, 1-Bromo-decane 112-71-0, 1-Bromo-tetradecane 616-47-7, N-Methyl imidazole 998-40-3 1120-71-4, 1, 3-Propane sultone 1493-13-6, Trifluoromethanesulfonic acid 1633-83-6, 1, 4-Butane sultone 7035-68-9, 1-Ethyl benzimidazole 7664-93-9, Sulfuric acid, reactions 16872-11-0, Tetrafluoroboric acid 17084-13-8, Potassium hexafluorophosphate 90076-65-6, Lithium bis(trifluoromethane sulfonimide)

RL: RCT (Reactant); RACT (Reactant or reagent)

(amperometric humidity sensor based on room-temperature ionic liquid)

IT 874-80-6P, N-Butyl pyridinium bromide 1702-42-7P, Tributylmethylphosphonium iodide 2534-66-9P, N-Octyl pyridinium bromide 3115-68-2P, Tetrabutylphosphonium bromide 15193-40-5P, Tributyltetradecylphosphonium bromide 38880-58-9P 58431-91-7P 65039-08-9P, 1-Ethyl-3-methyl imidazolium bromide 80297-71-8P 85100-77-2P, 1-Butyl-3-methyl imidazolium bromide 188589-32-4P, 1-Decyl-3-methylimidazolium bromide 849223-59-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(amperometric humidity sensor based on room-temperature ionic liquid)

L28 ANSWER 9 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2007:1150094 CAPLUS

DN 147:502043

ED Entered STN: 12 Oct 2007

TI Preparation of ionic liqs. from cycloalkane/benzene carboxylic acids and tertiary amines or quaternary ammonium hydroxides

IN Zhang, Suojiang; Yu, Yinghao; Yao, Hongwei

PA Institute of Process Engineering, Chinese Academy of Sciences, Peop. Rep. China

SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 6pp.

CODEN: CNXXEV

DT Patent

LA Chinese

CC 24-5 (Alicyclic Compounds)

Section cross-reference(s): 25

FAN.CNT 1

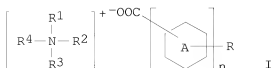
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 101050185	A	20071010	CN 2007-10099180	20070516
PRAI	CN 2007-10099180		20070516		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
CN 101050185	IPCI	C07C0211-62 [I,A]; C07C0211-00 [I,C*]; C07F0009-44 [I,A]; C07F0009-00 [I,C*]
	IPCR	C07C0211-00 [I,C]; C07C0211-62 [I,A]

OS CASREACT 147:502043; MARPAT 147:502043

GI



- AB Ionic liqs. I [wherein A = 5/6-membered ring skeleton; n = 1-5; R = alkyl; when R1 = H, R2 - R4 = alkyl or substituted OH, otherwise R1 - R4 = alkyl, (un)substituted OH or aryl] were prepared in one step from the corresponding carboxylic acids and tertiary amines or quaternary ammonium hydroxides. For instance, neutralization of cyclohexanecarboxylic acid with benzyltrimethylammonium hydroxide in methanol at 20°C for 22 h gave benzyltrimethylammonium cyclohexanecarboxylate. The obtained ionic liquid has high electrocond., high heat stability, and high electrochem. stability (no data).
- ST ionic liq prepn carboxylic acid quaternary ammonium hydroxide neutralization; cycloalkanecarboxylic benzoic acid tertiary amine ionic liq prepn
- IT Quaternary ammonium compounds, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydroxides; preparation of ionic liqs. from cycloalkane/benzene carboxylic acids and tertiary amines or quaternary ammonium hydroxides)
- IT Ionic liquids
Neutralization
(preparation of ionic liqs. from cycloalkane/benzene carboxylic acids and tertiary amines or quaternary ammonium hydroxides)
- IT Carboxylic acids, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of ionic liqs. from cycloalkane/benzene carboxylic acids and tertiary amines or quaternary ammonium hydroxides)
- IT Amines, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(tertiary; preparation of ionic liqs. from cycloalkane/benzene carboxylic acids and tertiary amines or quaternary ammonium hydroxides)
- IT Quaternary ammonium compounds, preparation
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(tetraalkyl; preparation of ionic liqs. from cycloalkane/benzene carboxylic acids and tertiary amines or quaternary ammonium hydroxides)
- IT 50-78-2, 2-Acetoxybenzoic acid 56-13-3 65-85-0, Benzoic acid, reactions 69-72-7, Salicylic acid, reactions 75-59-2, Tetramethylammonium hydroxide 77-98-5, Tetraethylammonium hydroxide 83-44-3, Deoxycholic acid 91-66-7, N,N-Diethylaniline 98-89-5, Cyclohexanecarboxylic acid 98-94-2 99-97-8, N,N-Dimethyl-4-methylaniline 100-37-8, N,N-Diethylethanolamine 100-85-6, Benzyltrimethylammonium hydroxide 102-69-2, Tripropylamine 102-82-9, Tributylamine 108-01-0, N,N-Dimethylethanolamine 108-16-7, N,N-Dimethylisopropanolamine 121-69-7, N,N-Dimethylaniline, reactions 123-41-1, Choline hydroxide 127-19-5, Dimethylacetamide 471-53-4, 18-β-Glycyrrhetinic acid 514-10-3, Abietic acid 546-18-9, 5β-Cholanic acid 590-78-3 1123-25-7, 1-Methyl-1-cyclohexanecarboxylic acid 1836-42-6, Benzyltriethylammonium hydroxide 1987-53-7 2052-49-5, Tetraethylammonium hydroxide 3179-63-3, N,N-Dimethylpropanolamine 3400-45-1, Cyclopentanecarboxylic acid 4499-86-9, Tetrapropylammonium hydroxide 4656-13-7 7087-68-5, Diisopropylethylamine 14898-63-6, Dodecyltrimethylammonium hydroxide 29960-45-0, Cyclopentanecarboxylic acid 35675-84-4, Methyltriethylammonium hydroxide 38792-89-1 52034-92-1, Dicyclohexylacetic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of ionic liqs. from cycloalkane/benzene carboxylic acids and tertiary amines or quaternary ammonium hydroxides)
- IT 2016-36-6P 15032-34-5P 955108-09-5P 955108-12-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of ionic liqs. from cycloalkane/benzene carboxylic acids and tertiary amines or quaternary ammonium hydroxides)

IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 67-63-0, Isopropanol, uses 67-64-1, Acetone, uses 110-82-7, Cyclohexane, uses 7732-18-5, Water, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (solvent; preparation of ionic liqs. from cycloalkane/benzene carboxylic acids and tertiary amines or quaternary ammonium hydroxides)

L28 ANSWER 10 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2007:1016184 CAPLUS
 DN 147:486138
 ED Entered STN: 11 Sep 2007
 TI Choline derivative-based ionic liquids
 AU Pernak, Juliusz; Syguda, Anna; Mirska, Ilona; Pernak, Anna; Nawrot, Jan; Pradzynska, Aleksandra; Griffin, Scott T.; Rogers, Robin D.
 CS Poznan University of Technology, Poznan, Pol.
 SO Chemistry--A European Journal (2007), 13(24), 6817-6827, S6817/1-S6817/9
 CODEN: CEUJED; ISSN: 0947-6539
 PB Wiley-VCH Verlag GmbH & Co. KGaA
 DT Journal
 LA English
 CC 23-4 (Aliphatic Compounds)
 Section cross-reference(s): 1, 5, 10, 63, 75, 76
 OS CASREACT 147:486138
 AB A total of sixty-three choline derivative-based ionic liqs.
 R1OCH2CH2N+Me2CH2OR2 X- (R1 = H, MeCO, n-C9H19CO; R2 = Et, n-Pr, n-hexyl, n-decyl, cyclododecyl, etc.) (I) in the forms of chlorides, acesulfamates, and bis(trifluoromethylsulfonyl)imides have been prepared and their phys. properties (d., viscosity, solubility, and thermal stability) have been determined
 Thirteen of these salts are known chlorides: precursors to the 26 water-soluble acesulfamates, 12 acesulfamates only partially miscible with water, and 12 water-insol. imides. The crystal structures for I (R1 = H; R2 = n-undecyl, cyclododecyl; X = Cl) were determined by X-ray anal. The antimicrobial (cocci, rods, and fungi) activities of the new hydrophilic acesulfamate-based ILs were measured and 12 of the compds. were found to be active. The alkoxymethyl(2-hydroxyethyl)dimethylammonium acesulfamates have been shown to be insect feeding deterrents and thus open up a new generation of synthetic deterrents based on ionic liqs. The alkoxymethyl(2-decanoyloxyethyl)dimethylammonium bis(trifluoromethylsulfonyl)imides have also been shown to act as fixatives for soft tissues and can furthermore be used as substitutes for formalin and also preservatives for blood.
 ST ammonium alkoxymethyl ionic liq antimicrobial antielectrostatic insect feeding deterrent
 IT Structure-activity relationship
 (bactericidal; preparation, crystal structure, phys. and antielectrostatic properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)
 IT Drugs
 Preservatives
 (blood preservatives; preparation, crystal structure, phys. and antielectrostatic properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)
 IT Molecular structure-property relationship
 (elec. potential; preparation, crystal structure, phys. and antielectrostatic properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)
 IT Electricity
 (electrostatics; preparation, crystal structure, phys. and antielectrostatic

- properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)
- IT Structure-activity relationship
(fungicidal; preparation, crystal structure, phys. and antielectrostatic properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)
- IT Structure-activity relationship
(insect feeding-inhibiting; preparation, crystal structure, phys. and antielectrostatic properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)
- IT Crystal structure
Molecular structure
(of (hydroxyethyl)dimethyl(undecyloxymethyl)ammonium chloride and of (hydroxyethyl)dimethyl(cyclododecyloxymethyl)ammonium chloride)
- IT Antibacterial agents
Density
Exchange reaction
Fungicides
Glass transition temperature
Hydrophobicity
Insect feeding inhibitors
Ionic liquids
Surface resistance
Thermal stability
Viscosity
(preparation, crystal structure, phys. and antielectrostatic properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)
- IT Quaternary ammonium compounds, preparation
RL: AGR (Agricultural use); BSU (Biological study, unclassified); PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation, crystal structure, phys. and antielectrostatic properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)
- IT 646069-04-7P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(crystal structure; preparation, crystal structure, phys. and antielectrostatic properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)
- IT 954115-51-6P 954115-52-7P 954115-53-8P 954115-54-9P 954115-55-0P
954115-63-0P 954115-64-1P 954115-65-2P 954115-66-3P 954115-67-4P
RL: AGR (Agricultural use); BSU (Biological study, unclassified); PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation, crystal structure, phys. and antielectrostatic properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)
- IT 952728-57-3P 954115-45-8P 954115-46-9P 954115-47-0P 954115-48-1P
954115-49-2P 954115-50-5P 954115-58-3P 954115-59-4P 954115-60-7P
954115-61-8P 954115-62-9P
RL: AGR (Agricultural use); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation, crystal structure, phys. and antielectrostatic properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)

IT 954115-57-2P 954115-71-0P
 RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation, crystal structure, phys. and antielectrostatic properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)

IT 954115-56-1P
 RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (preparation, crystal structure, phys. and antielectrostatic properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)

IT 954115-69-6P
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (preparation, crystal structure, phys. and antielectrostatic properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)

IT 38954-45-9P 38954-46-0P 38954-47-1P 38954-48-2P 38954-49-3P
 646068-98-6P 646068-99-7P 646069-00-3P 646069-01-4P 646069-02-5P
 767320-70-7P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation, crystal structure, phys. and antielectrostatic properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)

IT 954115-73-2P 954115-75-4P 954115-77-6P 954115-79-8P 954115-81-2P
 954115-83-4P 954115-85-6P 954115-87-8P 954115-89-0P 954115-91-4P
 954115-93-6P 954115-96-9P 954115-97-0P 954115-98-1P 954115-99-2P
 954116-00-8P 954116-01-9P 954116-02-0P 954116-03-1P 954116-04-2P
 954116-05-3P 954116-06-4P 954116-07-5P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation, crystal structure, phys. and antielectrostatic properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)

IT 108-01-0, N,N-Dimethylethanolamine 2351-69-1 3188-13-4,
 Ethoxymethyl chloride 3587-57-3 13497-61-5 13497-62-6 19416-65-0
 24566-90-3 24566-91-4 24566-92-5 24566-93-6 39979-92-5
 49791-06-2 55589-62-3 58567-10-5 90076-65-6, Lithium triflimide
 767320-71-8 767320-76-3 767320-77-4 767320-78-5 767320-79-6
 767320-80-9 767320-81-0 767320-82-1 767320-83-2 767320-84-3
 767320-85-4 954116-08-6 954116-09-7 954116-10-0 954116-11-1
 954116-12-2 954116-13-3 954116-14-4 954116-15-5 954116-16-6
 954116-17-7 954116-18-8 954116-19-9 954116-20-2 954116-21-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation, crystal structure, phys. and antielectrostatic properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)

IT 39031-08-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation, crystal structure, phys. and antielectrostatic properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)

IT 954115-95-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation, crystal structure, phys. and antielectrostatic properties, antimicrobial and insect feeding deterrent activity, and blood and tissue preservation ability of choline-derivative-based ionic liqs.)

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L28 ANSWER 11 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2007:809089 CAPLUS

DN 148:561452

ED Entered STN: 25 Jul 2007

TI Synthesis of multi-hydroxyl and sulfonyl dual-functionalized room temperature ionic liquids

AU Zhu, Guo Yang; Wang, Rong; Liu, Guo Hua; Xu, Li Qun; Zhang, Bei; Wu, Xia Qin

CS College of Life and Environment Science, Shanghai Normal University, Shanghai, 200234, Peop. Rep. China

SO Chinese Chemical Letters (2007), 18(6), 633-635

CODEN: CCLLEE7; ISSN: 1001-8417

PB Chinese Chemical Society

DT Journal

LA English

CC 23-12 (Aliphatic Compounds)

OS CASREACT 148:561452

AB Starting from the hydroxylamine (di-Me amino ethanol, triethanolamine) and 1,3-propane sultone, a series of hydroxyl and sulfonyl dual-functionalized zwitterionic salts and corresponding acidic room temperature ionic liqs. were synthesized. The hydroxyl groups of the synthesized substances were

confirmed by the ¹H NMR measurement. These zwitterionic salts and ionic liqs. may be used for synthesizing other functionalized ionic liqs. or ionic liquid-polymer (polyelectrolyte).

ST hydroxylamine reaction propane sultone sulfonic acid; ionic liq hydroxyl sulfonyl dual functionalized room temp prep

IT Ionic liquids
NMR (nuclear magnetic resonance)
(preparation of multi-hydroxyl and sulfonyl dual-functionalized room temperature ionic liqs. from hydroxylamine, 1,3-propane sultone, and sulfonic acids)

IT Sulfonic acids, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of multi-hydroxyl and sulfonyl dual-functionalized room temperature ionic liqs. from hydroxylamine, 1,3-propane sultone, and sulfonic acids)

IT 1026018-24-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(H-NMR spectra; preparation of multi-hydroxyl and sulfonyl dual-functionalized room temperature ionic liqs. from hydroxylamine, 1,3-propane sultone, and sulfonic acids)

IT 75-75-2, Methanesulfonic acid 102-71-6, Triethanolamine, reactions 104-15-4, p-Toluenesulfonic acid, reactions 108-01-0, Dimethyl aminoethanol 1120-71-4, 1,3-Propane sultone 1493-13-6, Trifluoromethanesulfonic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of multi-hydroxyl and sulfonyl dual-functionalized room temperature ionic liqs. from hydroxylamine, 1,3-propane sultone, and sulfonic acids)

IT 186699-98-1P 956699-85-7P 956699-86-8P 956699-87-9P 1026018-22-3P 1026018-25-6P 1026018-26-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of multi-hydroxyl and sulfonyl dual-functionalized room temperature ionic liqs. from hydroxylamine, 1,3-propane sultone, and sulfonic acids)

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L28 ANSWER 12 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2007:619447 CAPLUS

DN 147:33228

ED Entered STN: 08 Jun 2007

TI Use of hydroxylammonium salts as ionic liquid solvents for enzyme-catalyzed reactions

IN Walker, Adam John
 PA Bionigs Limited, UK
 SO PCT Int. Appl., 38pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 CC 45-5 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
 Section cross-reference(s): 23

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2007063327	A1	20070607	WO 2006-GB4503	20061204
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
GB 2437726	A	20071107	GB 2006-24157	20061204
PRAI GB 2005-24700	A	20051203		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2007063327	IPCI	C07C0239-10 [I,A]; C07C0239-12 [I,A]; C07C0239-00 [I,C*]; C07C0211-64 [I,A]; C07C0211-00 [I,C*]
	IPCR	C07C0239-00 [I,C]; C07C0239-10 [I,A]; C07C0211-00 [I,C]; C07C0211-64 [I,A]; C07C0239-12 [I,A]
GB 2437726	ECLA	C07C239/10; C07C239/12
	IPCI	C07C0239-10 [I,A]; C07C0059-06 [I,A]; C07C0059-00 [I,C*]; C07C0239-12 [I,A]; C07C0239-00 [I,C*]; C07C0311-49 [I,A]; C07C0311-00 [I,C*]; C12P0001-00 [I,A]; C12P0007-62 [I,A]
	IPCR	C07C0239-00 [I,C]; C07C0239-10 [I,A]; C07C0059-00 [I,C]; C07C0059-06 [I,A]; C07C0239-12 [I,A]; C07C0311-00 [I,C]; C07C0311-49 [I,A]; C12P0001-00 [I,C]; C12P0007-62 [I,C]; C12P0007-62 [I,A]
	ECLA	C07C239/10; C07C239/12

OS MARPAT 147:33228

AB An ionic liquid comprises cations of the formula R1R2R3N+-OR4, where R1, R2, R3 and R4 are each independently selected from hydrogen and hydrocarbyl, the ionic liquid containing ≤ 1% of water. The ionic liqs. may be used as solvents for chemical or biochem. reactions, in particular, for enzyme-catalyzed reactions. Thus, N,N-diethylhydroxylammonium acetate (m.p. < -20°, viscosity 12 cP at 25°, refractive index 1.414) was prepared by dissolving N,N-diethylhydroxylamine (90) and acetic acid (60.06 g) sep. in ethanol (250 mL each), and adding the acid solution dropwise to the amine solution over 1 h, while cooling with ice and stirring.

ST hydroxylammonium salt ionic liq solvent enzyme catalyzed reaction

IT Solvents

(organic; use of hydroxylammonium salts as ionic liquid solvents for enzyme-catalyzed reactions)

IT Ionic liquids

(use of hydroxylammonium salts as ionic liquid solvents for enzyme-catalyzed reactions)

IT Enzymes, uses

RL: CAT (Catalyst use); USES (Uses)
 (use of hydroxylammonium salts as ionic liquid solvents for
 enzyme-catalyzed reactions)

IT Quaternary ammonium compounds, preparation
 RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP
 (Preparation); USES (Uses)
 (use of hydroxylammonium salts as ionic liquid solvents for
 enzyme-catalyzed reactions)

IT 39004-71-2P, N,N-Diethylhydroxylammonium acetate 939384-89-1P
 939384-90-4P 939384-91-5P 939384-93-7P 939384-94-8P 939384-96-0P
 939384-97-1P
 RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP
 (Preparation); USES (Uses)
 (use of hydroxylammonium salts as ionic liquid solvents for
 enzyme-catalyzed reactions)

IT 939384-92-6P
 RL: IMF (Industrial manufacture); NUU (Other use, unclassified); RCT
 (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (use of hydroxylammonium salts as ionic liquid solvents for
 enzyme-catalyzed reactions)

IT 64-19-7, Acetic acid, reactions 75-75-2, Methanesulfonic acid 79-14-1,
 Glycolic acid, reactions 108-01-0, N,N-Dimethylethanolamine
 121-44-8, Triethylamine, reactions 127-09-3, Sodium acetate 1493-13-6,
 Triflic acid 3710-84-7, N,N-Diethylhydroxylamine 7647-01-0,
 Hydrochloric acid, reactions 7722-84-1, Hydrogen peroxide, reactions
 82113-65-3, Bis(trifluoromethylsulfonyl)imide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (use of hydroxylammonium salts as ionic liquid solvents for
 enzyme-catalyzed reactions)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
 (1) Anon
 (2) Anon
 (3) Anon
 (4) Anon
 (5) Anon
 (6) Anon
 (7) Anon
 (8) Anon; GAZZ CHIM ITAL 1954, V84, P915
 (9) Anon; J AM CHEM SOC 1927, V49, P1539
 (10) Anon; J AM CHEM SOC 1947, V69, P1731
 (11) Anon; J CHIN CHEM SOC 1977, V24, P115
 (12) Anon; J MOL STRUCT 1990, V239, P1
 (13) Anon; JUSTUS LIEBIGS ANN CHEM 1913, V397, P275
 (14) Anon; YAKUGAKU ZASSHI 1940, V60, P24
 (15) Hecht Stacie E; US 2006094616 A1 2006
 (16) Nippon Telegraph & Telephone; JP 2005149982 A 2005 CAPLUS
 (17) Takami, N; JP 11086905 A 1999 CAPLUS
 (18) Umemoto Teruo; US 2006094882 A1 2006
 (19) Wehner Wolfgang; US 4578489 A 1986 CAPLUS

L28 ANSWER 13 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2007:433670 CAPLUS
 DN 146:448426
 ED Entered STN: 19 Apr 2007
 TI Multi-functional ionic liquid compositions for
 overcoming polymorphism and imparting improved properties for active
 ingredients

IN Rogers, Robin D.; Daly, Daniel T.; Swatloski, Richard P.; Hough, Whitney
 L.; Davis, James Hillard; Smiglak, Marcin; Pernak, Juliusz; Spear, Scott
 K.
 PA The University of Alabama, USA

SO PCT Int. Appl., 199pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 CC 63-6 (Pharmaceuticals)
 Section cross-reference(s): 1, 5, 18
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2007044693	A2	20070419	WO 2006-US39454	20061010
	WO 2007044693	A3	20070823		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA			
	AU 2006302237	A1	20070419	AU 2006-302237	20061010
	CA 2625004	A1	20070419	CA 2006-2625004	20061010
	US 20070093462	A1	20070426	US 2006-545938	20061010
	EP 1931760	A2	20080618	EP 2006-836236	20061010
	R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR			
	MX 2008004618	A	20080616	MX 2008-4618	20080407
	KR 2008068679	A	20080723	KR 2008-710190	20080428
	IN 2008DN03782	A	20080815	IN 2008-DN3782	20080502
	CN 101326275	A	20081217	CN 2006-80046195	20080606
PRAI	US 2005-724604P	P	20051007		
	US 2005-724605P	P	20051007		
	US 2006-764850P	P	20060202		
	WO 2006-US39454	W	20061010		

CLASS	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	WO 2007044693	IPCI	A61K0031-555 [I,A]; A61K0031-28 [I,A]; C11D0017-00 [I,C]; C11D0017-00 [I,A]
	AU 2006302237	IPCR	C11D0017-00 [I,C]; C11D0017-00 [I,A]
	CA 2625004	IPCI	C11D0017-00 [I,C]; C11D0017-00 [I,A]
	US 20070093462	IPCI	A61K0031-555 [I,A]; A61K0031-28 [I,A]
		IPCR	A61K0031-555 [I,C]; A61K0031-555 [I,A]; A61K0031-28 [I,C]; A61K0031-28 [I,A]
		NCL	514/184.000; 514/185.000; 514/492.000
	EP 1931760	IPCI	C11D0017-00 [I,A]
		IPCR	C11D0017-00 [I,C]; C11D0017-00 [I,A]
	MX 2008004618	IPCI	C11D0017-00 [I,A]
	KR 2008068679	IPCI	C11D0017-00 [I,A]
	IN 2008DN03782	IPCI	C11D0017-00 [ICM,7]
	CN 101326275	IPCI	C11D0017-00 [I,A]

AB Disclosed are ionic liqs. and methods of preparing ionic liquid compns. of active pharmaceutical, biol., nutritional, and energetic ingredients. Also disclosed are methods of using the compns. described herein to overcome polymorphism, overcome solubility and delivery problems, to control release rates, add functionality, enhance efficacy (synergy), and improve ease of use and manufacture Hexadecylpyridinium valproic acid was prepared by

the reaction of hexadecylpyridinium chloride with sodium valproate.

ST pharmaceutical ionic liq multifunctional property

IT Quaternary ammonium compounds, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(alkylbenzylidimethyl, chlorides; multifunctional ionic liquid comps. for overcoming polymorphism and imparting improved properties for active ingredients)

IT Analgesics

Anesthetics

Anti-inflammatory agents

Antibacterial agents

Antiviral agents

Crystal polymorphism

Dietary supplements

Drug delivery systems

Dyes

Food additives

Herbicides

Ionic liquids

Metathesis

Neutralization

Nutrition, animal

Pesticides

Preservatives

Solvents

Sunscreens

Surfactants

Thickening agents

Viscosity

(multifunctional ionic liquid comps. for overcoming polymorphism and imparting improved properties for active ingredients)

IT Growth regulators, plant

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(multifunctional ionic liquid comps. for overcoming polymorphism and imparting improved properties for active ingredients)

IT 63-36-5DP, benzalkonium salts, biological studies 137-58-6DP, Lidocaine, complex with silver 766-76-7DP, benzalkonium salts, biological studies 7428-34-4P 16766-82-8DP, benzalkonium salts and ternary salts with acesulfamate or sulfathiazolate 17263-38-6DP, benzalkonium salts, biological studies 27059-75-2P 28598-04-1P 45297-26-5DP, benzalkonium salts and ternary salts with mepenzolate 46480-62-0DP, benzalkonium salts and ternary salts with saccharinate 54836-26-9DP, benzalkonium salts 56965-02-7DP, benzalkonium derivs. 71303-05-4DP, benzalkonium salts 112210-22-7P 119441-67-7DP, benzalkonium salts and ternary salts with saccharinate 132781-87-4P 136869-01-7DP, benzalkonium salts 479620-35-4P 736071-66-2DP, benzalkonium salts 934544-24-8P 934544-25-9P 934544-26-0P 934544-27-1P 934544-28-2P 934544-29-3P 934544-30-6P 934544-31-7P 934544-32-8DP, benzalkonium salts 934544-33-9P 934544-34-0P 934544-35-1DP, benzalkonium salts 934544-36-2P 934544-37-3P 934544-38-4P 934544-39-5P 934544-40-8P 934544-41-9P 934544-42-0P 934544-43-1P, biological studies 934544-44-2P 934544-46-4P 934544-47-5P 934544-48-6P 934544-49-7P 934544-50-0P 934544-52-2P 934544-54-4P 934544-55-5P 934544-56-6P 934544-61-3P 934544-62-4P 934544-63-5P 934544-64-6P 934544-65-7P 934544-66-8P 934544-67-9P 934544-72-6P 934544-73-7P 934544-75-9P 934544-77-1P 934544-79-3P 934544-81-7P 934544-83-9P 934544-84-0P 934544-86-2P 934544-88-4P 934544-90-8P 934544-92-0P 934544-93-1P 934544-95-3P 934544-97-5P 934545-00-3P 934545-03-6P 934545-06-9P 934545-09-2P 934545-12-7P 934545-16-1P 934545-19-4P 934545-23-0P 934545-25-2P 934545-27-4P 934545-29-6P 934545-31-0P 934545-33-2P 934545-34-3P 934545-36-5P 934545-38-7P 934545-41-2P 934545-43-4P 934545-45-6P 934545-46-7P 934545-48-9P 934545-50-3P 934545-51-4P

934545-52-5P 934545-54-7P 934545-56-9P 934545-58-1P 934545-59-2P
 934545-61-6P 934545-63-8P 934545-65-0P 934545-66-1P 934545-68-3P
 934545-69-4P 934545-71-8P 934545-72-9P 934545-75-2P 934545-76-3P
 934545-77-4P 934590-93-9P 934590-94-0P 934590-95-1P

RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use);
 BIOL (Biological study); PREP (Preparation); USES (Uses)

(multifunctional ionic liquid compns. for overcoming polymorphism and
 imparting improved properties for active ingredients)

IT 50-78-2 54-21-7 54-64-8 59-67-6, 3-Pyridinecarboxylic acid,
 reactions 69-72-7, reactions 73-78-9, Lidocaine hydrochloride
 76-90-4, Mepenzolate bromide 90-64-2 104-15-4, reactions
 108-01-0 113-98-4, Potassium penicillin G 123-03-5,
 Hexadecylpyridinium chloride 127-56-0 128-44-9 140-10-3, reactions
 144-74-1 532-32-1 577-11-7, Sodium docusate 582-25-2, Potassium
 benzoate 1069-66-5 1421-89-2, 2-(Dimethylamino)ethyl acetate
 2353-45-9 2390-68-3 3006-15-3, Colawet MA 80 6484-89-5 7173-51-5
 7761-88-8, Nitric acid silver(1+) salt (1:1), reactions 13497-61-5,
 Chloromethyl dodecyl ether 15307-79-6 15687-27-1 24566-93-6,
 Chloromethyl undecyl ether 26159-34-2, Sodium naproxen 49791-06-2,
 Chloromethyl heptyl ether 55589-62-3, Acesulfame potassium 59703-84-3
 61334-06-3, Acesulfame sodium 66357-59-3, Ranitidine hydrochloride
 524747-06-6 646069-04-7

RL: RCT (Reactant); RACT (Reactant or reagent)
 (multifunctional ionic liquid compns. for overcoming polymorphism and
 imparting improved properties for active ingredients)

IT 767320-85-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (multifunctional ionic liquid compns. for overcoming polymorphism and
 imparting improved properties for active ingredients)

L28 ANSWER 14 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:681182 CAPLUS

DN 145:145001

ED Entered STN: 14 Jul 2006

TI Preparation of quaternary ammonium compounds as base stable ionic
 liquids

IN Earle, Martyn John; Frohlich, Ute; Huq, Susanne; Katdare, Suhas; Lukasik,
 Rafal Marcin; Bogel, Ewa; Plechkova, Natalia Vladimirovna; Seddon, Kenneth
 Richard

PA The Queen's University of Belfast, UK

SO PCT Int. Appl., 35 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM B01J

CC 21-2 (General Organic Chemistry)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006072785	A2	20060713	WO 2006-GB21	20060104
WO 2006072785	A3	20070426		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,			

JP 2008526822 IPCI L01J; L01J; L01J; L01J; L01J; L01J; L01J; L01J; L01J; L01J; L01J; M07C; M07C; M07D; M07D
C07B0061-00 [I,A]; C07C0221-00 [I,A]; C07C0225-12 [I,A]; C07C0225-00 [I,C*]; C07C0049-623 [I,A]; C07C0049-203 [I,A]; C07C0049-403 [I,A]; C07C0045-72 [I,A]; C07C0049-603 [I,A]; C07C0049-00 [I,C*]; C07C0045-74 [I,A]; C07C0045-00 [I,C*]; C07C0211-63 [N,A]; C07C0211-00 [N,C*]; C07C0215-08 [N,A]; C07C0215-00 [N,C*]; C07F0009-54 [N,A]; C07F0009-00 [N,C*]
FTerm 4H006/AA02; 4H006/AA03; 4H006/AB83; 4H006/AC13; 4H006/AC21; 4H006/AC22; 4H006/AC28; 4H006/AC52; 4H006/AD40; 4H050/AA03; 4H050/AB83
MX 2007008160 IPCI B01J0031-02 [I,C]; C07C0209-60 [I,A]; C07C0209-00 [I,C*]; C07C0045-74 [I,A]; C07C0045-00 [I,C*]
KR 2007101301 IPCI B01J0031-02 [I,A]; C07C0313-00 [I,A]; C07C0045-66 [I,A]; C07C0045-00 [I,C*]
CN 101137436 IPCI B01J0031-02 [I,A]; C07C0209-60 [I,A]; C07C0209-00 [I,C*]; C07C0045-74 [I,A]; C07C0045-00 [I,C*]

OS MARPAT 145:145001

AB The present invention relates to novel base stable ionic liqs. such as N-alkyl-N,N-dimethylethanolamine salts, N-alkyl-DABCO salts, N-alkyl-tetramethylenediamine salts, and N-alkyl-N-methylpyrazolium salts and uses thereof as solvents in chemical reactions, especially base catalyzed chemical

reactions and reactions comprising the use of strong bases. Chemical reactions include Mannich reaction, Robinson annulation, Michael reaction, Heck reaction, epoxidn., hydrogenation, aldol condensation, transesterification, esterification, hydrolysis, oxidation, reduction, hydration,

dehydration, substitution, aromatic substitution, addition (including to carbonyl groups), elimination, polymerization, depolymn., oligomerization, dimerization, coupling, electrocyclicalization, isomerization, carbene formation, epimerization, inversion, rearrangement, photochem., microwave assisted, thermal, sonochem. and disproportionation reactions. Thus, N-alkylation of 2-(dimethylamino)ethanol by Pr iodide and treatment of the resulting N-(2-hydroxyethyl)-N,N-dimethyl-N-propylammonium iodide with LiNTf2 (Tf = CF3SO2) gave PrMe2N+CH2CH2OH.[NTf2]-. Cyclopentanone was condensed with pentanal in the presence of L-propine catalyst in EtMe2N+CH2CH2OH.[NTf2]- at room temperature for 18 h to give 94% 2-pentyl-2-cyclopenten-1-one.

ST aldol condensation quaternary ammonium compd solvent prepn; quaternary ammonium compd prepn solvent base stable ionic liq; Mannich reaction Robinson annulation Michael reaction solvent ionic liq; alkylidimethylethanolamine salt prepn solvent base stable ionic liq; alkyl DABCO salt prepn solvent base stable ionic liq; alkyltetramethylenediamine salt prepn solvent base stable ionic liq; alkylmethylpyrazolium salt prepn solvent base stable ionic liq

IT Arylation
(Heck; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Cyclization
(Robinson annulation; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Substitution reaction
(aromatic; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Cyclization
(electrocyclic; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Carbenes (methylene derivatives)

RL: SPN (Synthetic preparation); PREP (Preparation)

(formation; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Substitution reaction, nucleophilic
(inversion reaction; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Microwave
(microwave assisted reactions; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Polymerization
(oligomerization; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Solvents
(organic; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Addition reaction
Aldol condensation
Autoxidation
Coupling reaction
Dehydration reaction
Depolymerization
Dimerization
Disproportionation
Elimination reaction
Epoxidation
Hydration, chemical
Hydrogenation
Hydrolysis
Ionic liquids
Isomerization
Mannich reaction
Michael reaction
Photolysis
Polymerization
Rearrangement
Reduction
Substitution reaction
Transesterification
(preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Quaternary ammonium compounds, preparation
RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Reaction
(sonochem. reactions; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT Reaction
(thermal; preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT 78-59-1 123-42-2 141-79-7 504-20-1 27203-92-5
RL: PRPH (Prophetic)
(Preparation of quaternary ammonium compounds as base stable ionic liquids)

IT 111-66-0P, 1-Octene 111-67-1P, 2-Octene 898256-56-9P,
1,3,5-Trimethylpyrazole hydrobromide
RL: BYP (Byproduct); PREP (Preparation)
(preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT 123-75-1, Pyrrolidine, uses 147-85-3, L-Proline, uses 1305-62-0,
Calcium hydroxide, uses 1310-73-2, Sodium hydroxide, uses 4111-54-0,

Lithium diisopropylamide 6552-73-4, Sodium methoxide-d3 7789-23-3D,
Potassium fluoride, supported on alumina 14014-06-3, Sodium hydroxide-d
20734-58-1, Proton sponge

RL: CAT (Catalyst use); USES (Uses)

(preparation of quaternary ammonium compds. as base stable ionic liqs. as
solvents in base-catalyzed chemical reactions)

IT 898256-55-8P

RL: NUU (Other use, unclassified); RCT (Reactant); SPN (Synthetic
preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of quaternary ammonium compds. as base stable ionic liqs. as
solvents in base-catalyzed chemical reactions)

IT 4535-70-0P, N-Ethyl-N-(2-hydroxyethyl)-N,N-dimethylammonium bromide
7009-61-2P, N-Dodecyl-N-(2-hydroxyethyl)-N,N-dimethylammonium bromide
13186-62-4P, N-(2-Hydroxyethyl)-N,N-dimethyl-N-propylammonium bromide
15061-91-3P, N-(2-Hydroxyethyl)-N,N-dimethyl-N-octadecylammonium bromide
28228-54-8P, N-(2-Hydroxyethyl)-N-hexyl-N,N-dimethylammonium chloride
28508-15-8P, N-Butyl-N-(2-hydroxyethyl)-N,N-dimethylammonium bromide
33249-14-8P 39995-55-6P, N-Decyl-N-(2-hydroxyethyl)-N,N-dimethylammonium
bromide 50938-57-3P 62634-05-3P 62634-13-3P 62634-16-6P
62634-17-7P 122135-71-1P, N-(2-Hydroxyethyl)-N,N-dimethyl-N-
octylammonium bromide 123714-89-6P,
N-Decyl-N-[2-(dimethylamino)ethyl]-N,N-dimethylammonium bromide
171874-92-3P 202256-55-1P 202256-57-3P 214349-74-3P 219787-58-3P,
N-Hexyl-N-(2-hydroxyethyl)-N,N-dimethylammonium bromide 342789-81-5P
783354-56-3P 852509-35-4P 854102-71-9P 863031-17-8P 885456-22-4P
898256-40-1P 898256-41-2P, N-(2-Butoxyethyl)-N-octyl-N,N-
dimethylammonium bromide 898256-42-3P,
N-[2-(Hexyloxy)ethyl]-N-hexyl-N,N-dimethylammonium bromide 898256-43-4P,
N-(2-Butoxyethyl)-N-butyl-N,N-dimethylammonium bromide 898256-44-5P,
N,N-Dimethyl-N-octyl-N-[2-(octyloxy)ethyl]ammonium bromide 898256-45-6P,
N-Decyl-N-[2-(decyloxy)ethyl]-N,N-dimethylammonium bromide 898256-46-7P,
N-Ethyl-N-(2-hydroxyethyl)-N,N-dimethylammonium tetrafluoroborate
898256-47-8P, N-Ethyl-N-(2-hydroxyethyl)-N,N-dimethylammonium
trifluoromethanesulfonate 898256-48-9P,
N-(2-Hydroxyethyl)-N,N-dimethyl-N-propylammonium tetrafluoroborate
898256-49-0P, N-(2-Hydroxyethyl)-N,N-dimethyl-N-propylammonium
trifluoromethanesulfonate 898256-50-3P 898256-51-4P 898256-52-5P
898256-53-6P, N-[2-(Dimethylamino)ethyl]-N,N-dimethyl-N-pentylammonium
bromide 898256-54-7P, N-[2-(Dimethylamino)ethyl]-N,N-dimethyl-N-
octylammonium bromide 898256-57-0P 898256-59-2P 898256-60-5P
898256-61-6P 898256-62-7P 898256-63-8P 898256-64-9P 898256-65-0P
898256-66-1P 898256-68-3P 898256-70-7P 898256-72-9P 898256-74-1P
898256-75-2P 898256-76-3P 898256-77-4P 898256-78-5P 898256-79-6P
898256-80-9P 898256-82-1P 898256-83-2P 898256-84-3P 898256-85-4P
898256-86-5P

RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP
(Preparation); USES (Uses)

(preparation of quaternary ammonium compds. as base stable ionic liqs. as
solvents in base-catalyzed chemical reactions)

IT 1128-08-1P, Dihydrojasmane

RL: PNU (Preparation, unclassified); PREP (Preparation)

(preparation of quaternary ammonium compds. as base stable ionic liqs. as
solvents in base-catalyzed chemical reactions)

IT 64-17-5, Ethanol, reactions 71-23-8, n-Propanol, reactions 71-36-3,
n-Butanol, reactions 71-41-0, n-Pentanol, reactions 74-96-4, Ethyl
bromide 78-94-4, Methyl vinyl ketone, reactions 106-94-5, n-Propyl
bromide 107-08-4, Propyl iodide 108-01-0,
2-(Dimethylamino)ethanol 108-94-1, Cyclohexanone, reactions 109-65-9,
n-Butyl bromide 110-18-9, N,N,N',N'-Tetramethylethylenediamine
110-53-2, Pentyl bromide 110-62-3, Pentanal 110-91-8, Morpholine,
reactions 111-25-1, n-Hexyl bromide 111-27-3, n-Hexanol, reactions
111-83-1, n-Octyl bromide 111-87-5, n-Octanol, reactions 112-29-8,

n-Decyl bromide 112-30-1, 1-Decanol 112-53-8, 1-Dodecanol 112-71-0, n-Tetradecyl bromide 112-72-1, n-Tetradecanol 112-82-3, n-Hexadecyl bromide 112-89-0, n-Octadecyl bromide 112-92-5, n-Octadecanol 120-92-3, Cyclopentanone 124-63-0, Methanesulfonyl chloride 143-15-7, n-Dodecyl bromide 280-57-9, DABCO 504-02-9, 1,3-Cyclohexanedione 544-10-5, n-Hexyl chloride 930-36-9 1072-91-9, 1,3,5-Trimethylpyrazole 1122-58-3, 4-Dimethylaminopyridine 1193-55-1, 2-Methylcyclohexane-1,3-dione 16940-81-1, Hexafluorophosphoric acid 21324-39-0, Sodium hexafluorophosphate 30525-89-4, Paraformaldehyde 36653-82-4, n-Hexadecanol 90076-65-6, Lithium bis(trifluoromethanesulfonimide)

RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT 62-50-0P, Ethyl methanesulfonate 1912-31-8P, Propyl methanesulfonate 1912-32-9P, Butyl methanesulfonate 3240-94-6P, 2-(Morpholin-4-yl)ethyl chloride 5073-65-4P, 2-Methyl-2-(3-oxobutyl)cyclohexane-1,3-dione 6222-16-8P, Tetradecyl methanesulfonate 6968-20-3P, Pentyl methanesulfonate 16156-50-6P, Hexyl methanesulfonate 16156-52-8P, Octyl methanesulfonate 16424-35-4P, 2-Pentylidenecyclopentanone 20779-14-0P, Hexadecyl methanesulfonate 26942-62-1P, 2-(3-Oxobutyl)cyclohexanone 32492-73-2P, N-(2-Hydroxyethyl)-N,N-dimethyl-N-propylammonium iodide 34084-81-6P, 2-(3-Oxobutyl)cyclohexane-1,3-dione 41233-29-8P, Decyl methanesulfonate 42558-01-0P, 2-(1-Hydroxypentyl)cyclopentanone 159438-86-5P, Undecyl methanesulfonate

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT 100-58-3, Phenylmagnesium bromide

RL: RGT (Reagent); RACT (Reactant or reagent)
(preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

IT 1196-55-0P, 2,3,4,4a,5,6,7,8-Octahydronaphthalene-2-one 24071-91-8P, 2-[(Morpholin-4-yl)methyl]cyclohexanone 25564-22-1P, 2-Pentyl-2-cyclopenten-1-one 42576-97-6P, 1,2,3,4,6,7,8,8a-Octahydronaphthalene-1,6-dione 99178-63-9P, 4-[2-(2-(Dimethylamino)ethoxy)ethyl]morpholine 100348-93-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of quaternary ammonium compds. as base stable ionic liqs. as solvents in base-catalyzed chemical reactions)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Anon; DE 10247578 A1 CAPLUS
- (2) Anon; US 20040097755 A1 CAPLUS
- (3) Anon; WO 2004029004 A1 CAPLUS
- (4) Anon; US 6552232 B2 CAPLUS

L28 ANSWER 15 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:681152 CAPLUS

DN 145:145000

ED Entered STN: 14 Jul 2006

TI Preparation of quaternary ammonium compounds as basic ionic liquids

IN Earle, Martyn John; Seddon, Kenneth Richard; Forsyth, Stewart; Frohlich, Ute; Gunaratne, Nimal; Katdare, Suhas

PA The Queen's University of Belfast, UK

SO PCT Int. Appl., 51 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM B01J
CC 21-2 (General Organic Chemistry)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006072775	A2	20060713	WO 2006-GB6	20060104
	WO 2006072775	A3	20070426		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA			
	EP 1853385	A2	20071114	EP 2006-700155	20060104
	R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU			
	JP 2008526821	T	20080724	JP 2007-549946	20060104
	KR 2007104899	A	20071029	KR 2007-717743	20070731
	CN 101137437	A	20080305	CN 2006-80005670	20070822
PRAI	GB 2005-29	A	20050104		
	WO 2006-GB6	W	20060104		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2006072775	ICM	B01J
	IPCI	B01J0031-02 [I,C]; B01J0031-02 [I,A]; C07B0037-00 [I,C]; C07B0037-04 [I,A]; C07C0045-00 [I,C]; C07C0045-62 [I,A]; C07C0045-69 [I,A]; C07C0045-72 [I,A]; C07C0209-00 [I,C]; C07C0209-60 [I,A]; C07D0301-00 [I,C]; C07D0301-12 [I,A]
	IPCR	B01J0031-02 [I,C]; B01J0031-02 [I,A]; B01J0031-16 [N,C*]; B01J0031-22 [N,A]; C07B0037-00 [I,C]; C07B0037-04 [I,A]; C07B0061-00 [I,C*]; C07B0061-00 [I,A]; C07C0045-00 [I,C]; C07C0045-51 [I,A]; C07C0045-62 [I,A]; C07C0045-66 [I,A]; C07C0045-67 [I,A]; C07C0045-69 [I,A]; C07C0045-72 [I,A]; C07C0045-73 [I,A]; C07C0045-74 [I,A]; C07C0209-00 [I,C]; C07C0209-60 [I,A]; C07C0211-00 [I,C*]; C07C0211-63 [I,A]; C07C0217-00 [I,C*]; C07C0217-08 [I,A]; C07D0213-00 [I,C*]; C07D0213-73 [I,A]; C07D0233-00 [I,C*]; C07D0233-54 [I,A]; C07D0301-00 [I,C]; C07D0301-12 [I,A]; C07D0303-00 [I,C*]; C07D0303-32 [I,A]
	ECLA	C07C217/08; B01J031/02B; B01J031/02C; B01J031/02E; B01J031/02E4; B01J031/02G; B01J031/02G2; C07B061/00; C07C045/51B2+47/228; C07C045/62+47/228; C07C045/66+49/637; C07C045/66+49/203; C07C045/66+49/603; C07C045/66+49/647; C07C045/67+49/603; C07C045/67+49/597; C07C045/72+49/17; C07C045/72+49/497; C07C045/72+49/707; C07C045/73+49/403; C07C045/74+49/203; C07C045/74+49/647; C07C211/63; C07D213/73B; C07D233/54C; C07D303/32; L01J; L01J; L01J; L01J; L01J; L01J; L01J; L01J; L01J; M07D
EP 1853385	IPCI	B01J0031-02 [I,A]; C07D0301-12 [I,A]; C07D0301-00

		[I,C*]; C07C0209-60 [I,A]; C07C0209-00 [I,C*]; C07C0045-72 [I,A]; C07C0045-69 [I,A]; C07C0045-62 [I,A]; C07C0045-00 [I,C*]; C07B0037-04 [I,A]; C07B0037-00 [I,C*]
	IPCR	B01J0031-02 [I,C]; B01J0031-02 [I,A]; B01J0031-16 [N,C*]; B01J0031-22 [N,A]; C07B0037-00 [I,C]; C07B0037-04 [I,A]; C07B0061-00 [I,C*]; C07B0061-00 [I,A]; C07C0045-00 [I,C]; C07C0045-51 [I,A]; C07C0045-62 [I,A]; C07C0045-66 [I,A]; C07C0045-67 [I,A]; C07C0045-69 [I,A]; C07C0045-72 [I,A]; C07C0045-73 [I,A]; C07C0045-74 [I,A]; C07C0209-00 [I,C]; C07C0209-60 [I,A]; C07C0211-00 [I,C*]; C07C0211-63 [I,A]; C07C0217-00 [I,C*]; C07C0217-08 [I,A]; C07D0213-00 [I,C*]; C07D0213-73 [I,A]; C07D0233-00 [I,C*]; C07D0233-54 [I,A]; C07D0301-00 [I,C]; C07D0301-12 [I,A]; C07D0303-00 [I,C*]; C07D0303-32 [I,A]
	ECLA	C07C217/08; B01J031/02B; B01J031/02C; B01J031/02E; B01J031/02E4; B01J031/02G; B01J031/02G2; C07B061/00; C07C045/51B2+47/228; C07C045/62+47/228; C07C045/66+49/637; C07C045/66+49/203; C07C045/66+49/603; C07C045/66+49/647; C07C045/67+49/603; C07C045/67+49/597; C07C045/72+49/17; C07C045/72+49/497; C07C045/72+49/707; C07C045/73+49/403; C07C045/74+49/203; C07C045/74+49/647; C07C211/63; C07D213/73B; C07D233/54C; C07D303/32; L01J; L01J; L01J; L01J; L01J; L01J; L01J; M07D
JP 2008526821	IPCI	C07C0211-62 [I,A]; C07C0211-00 [I,C*]; C07C0309-04 [I,A]; C07C0309-00 [I,C*]; C07C0217-08 [I,A]; C07C0311-09 [I,A]; C07C0311-00 [I,C*]; C07C0217-74 [I,A]; C07C0217-00 [I,C*]; C07C0213-00 [I,A]; C07C0225-12 [I,A]; C07C0225-00 [I,C*]; C07C0221-00 [I,A]; C07C0049-637 [I,A]; C07C0045-66 [I,A]; C07C0049-603 [I,A]; C07C0049-00 [I,C*]; C07C0045-62 [I,A]; C07C0047-228 [I,A]; C07C0047-20 [I,C*]; C07C0045-71 [I,A]; C07C0045-00 [I,C*]; C07C0255-41 [I,A]; C07C0255-00 [I,C*]; C07C0253-30 [I,A]; C07C0253-00 [I,C*]; C07D0453-02 [I,A]; C07D0453-00 [I,C*]; C07D0213-74 [I,A]; C07D0213-00 [I,C*]; C07D0295-08 [I,A]; C07D0295-00 [I,C*]; C07D0301-12 [I,A]; C07D0301-00 [I,C*]; C07D0303-12 [I,A]; C07D0303-00 [I,C*]; C07D0233-64 [I,A]; C07D0233-00 [I,C*]; C07D0207-06 [I,A]; C07D0207-00 [I,C*]; C07B0061-00 [N,A]
	FTERM	4C048/AA01; 4C048/BB15; 4C048/CC01; 4C048/UU03; 4C048/XX02; 4C048/XX05; 4C055/AA04; 4C055/BA01; 4C055/CA01; 4C055/DA52; 4C055/DB02; 4C055/FA01; 4C055/FA37; 4C064/AA06; 4C064/CC02; 4C064/DD01; 4C064/EE01; 4C064/FF03; 4C064/GG01; 4C064/HH04; 4C069/AA02; 4C069/BB02; 4C069/BB16; 4C069/BB34; 4C069/CC13; 4H006/AA01; 4H006/AA03; 4H006/AB40; 4H006/AB80; 4H006/AC11; 4H006/AC25; 4H006/AC28; 4H006/AC41; 4H006/BB19; 4H006/BB24; 4H006/BJ20; 4H006/BJ50; 4H006/BN20; 4H006/BP10; 4H006/BP30; 4H006/BR70; 4H006/BU50; 4H039/CA19; 4H039/CA40; 4H039/CA41; 4H039/CA42; 4H039/CE90; 4H039/CF30; 4H039/CH10; 4H039/CH20
KR 2007104899	IPCI	B01J0031-02 [I,A]; B01J0031-00 [I,A]; B01D0011-04 [I,A]
CN 101137437	IPCI	B01J0031-02 [I,A]; C07D0301-12 [I,A]; C07D0301-00 [I,C*]; C07C0209-60 [I,A]; C07C0209-00 [I,C*]; C07C0045-72 [I,A]; C07C0045-69 [I,A]; C07C0045-62

[I,A]; C07C0045-00 [I,C*]; C07B0037-04 [I,A];
C07B0037-00 [I,C*]

OS CASREACT 145:145000; MARPAT 145:145000

AB This invention relates to preparation and use of ionic liqs. as solvents in base-catalyzed chemical reactions wherein the ionic liquid is composed of at least one species of cation and at least one species of anion, characterized in that a cation of the ionic liquid comprises a pos. charge moiety and a basic moiety, and further wherein such ionic liqs. may be used as promoters or catalysts for the chemical reactions. Chemical reactions include Heck Reaction, Suzuki coupling, nucleophilic displacement reactions, hydrolysis, esterification, transesterification, aldol reactions, epoxidn., hydrogenation, condensation, oxidation reduction, hydration,

dehydration, substitution, aromatic substitution, addition (including to carbonyl groups), elimination, polymerization, depolymn., oligomerization, dimerization, coupling, electrocyclic, isomerization, carbene formation, epimerization, inversion, rearrangement, photochem., microwave assisted, thermal, sonochem. and disproportionation reactions. Thus, etherification of 2-(dimethylamino)ethanol with 2-(diisopropylamino)ethanol hydrochloride followed by regioselective quaternization with Et bromide and treatment with lithium bis(triflimide) gave a room temperature ionic liquid of formula PrNMe₂N+CH₂CH₂OCH₂CH₂N(i-Pr)₂.N-(SO₂CF₃)₂ (I). Epoxidn. of chalcone in this ionic liquid I gave chalcone epoxide with 100% conversion.

ST quaternary ammonium compd prepn solvent catalyst ionic liq

IT Arylation

(Heck; preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Substitution reaction

(aromatic; preparation of quaternary ammonium compds. as basic ionic liqs. in

base-catalyzed chemical reactions)

IT Cyclization

(electrocyclic; preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Carbenes (methylene derivatives)

RL: SPN (Synthetic preparation); PREP (Preparation)

(formation; preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Reaction

(inversion; preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Reaction

(microwave-assisted; preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Polymerization

(oligomerization; preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Addition reaction

Aldol condensation

Condensation reaction

Coupling reaction

Dehydration reaction

Depolymerization

Dimerization

Disproportionation

Elimination reaction

Epimerization

Epoxidation

Hydration, chemical

Hydrogenation

Hydrolysis

Ionic liquids

Isomerization
 Oxidation
 Photolysis
 Polymerization
 Rearrangement
 Reduction
 Substitution reaction
 Substitution reaction, nucleophilic
 Suzuki coupling reaction
 Transesterification
 (preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Quaternary ammonium compounds, uses
 RL: CAT (Catalyst use); NUU (Other use, unclassified); USES (Uses)
 (preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Reaction
 (sonochem.; preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT Reaction
 (thermal; preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT 78-59-1 123-42-2 141-79-7 504-20-1 15409-60-6 67382-39-2
 123134-25-8
 RL: PRPH (Prophetic)
 (Preparation of quaternary ammonium compounds as basic ionic liquids)

IT 147-85-3, L-Proline, uses 3375-31-3
 RL: CAT (Catalyst use); USES (Uses)
 (preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT 898535-34-7P
 RL: CAT (Catalyst use); NUU (Other use, unclassified); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT 33249-14-8P 50938-57-3P 62634-05-3P 62634-13-3P 62634-16-6P
 62634-17-7P 106303-35-9P 114203-57-5P,
 4-(Dimethylamino)-1-ethylpyridinium bromide 123714-89-6P 171874-92-3P
 171894-19-2P, N-[2-(Dimethylamino)ethyl]-N,N-dimethyl-N-octadecylammonium
 bromide 202256-55-1P 202256-57-3P 214349-74-3P 289910-39-0P,
 N-Ethyl-N-[2-(dimethylamino)ethyl]-N,N-dimethylammonium bromide
 395677-61-9P, 4-(Dimethylamino)-1-hexylpyridinium bromide 783354-56-3P
 863031-17-8P 898256-51-4P 898256-52-5P 898256-53-6P,
 N-[2-(Dimethylamino)ethyl]-N,N-dimethyl-N-pentylammonium bromide
 898256-54-7P, N-[2-(Dimethylamino)ethyl]-N,N-dimethyl-N-octylammonium
 bromide 898256-84-3P, 4-(Dimethylamino)-1-ethylpyridinium
 methanesulfonate 898256-85-4P 898535-32-5P 898535-36-9P
 898535-38-1P 898535-40-5P 898535-42-7P 898535-44-9P 898535-44-9P
 898535-47-2P 898535-49-4P 898535-51-8P 898535-53-0P
 RL: CAT (Catalyst use); NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (preparation of quaternary ammonium compds. as basic ionic liqs. in base-catalyzed chemical reactions)

IT 62-50-0, Ethyl methanesulfonate 74-96-4, Ethyl bromide 75-03-6, Ethyl
 iodide 78-94-4, Vinyl methyl ketone, reactions 94-41-7, Chalcone
 96-79-7, 2-(Diisopropylamino)ethyl chloride 100-52-7, Benzaldehyde,
 reactions 105-56-6, Ethyl cyanoacetate 106-94-5, n-Propyl bromide
 108-01-0, N,N-Dimethylethanolamine 109-65-9, n-Butyl bromide
 110-18-9, N,N,N',N'-Tetramethylethylenediamine 110-53-2, n-Pentyl
 bromide 110-62-3, Pentanal 111-18-2 111-25-1, n-Hexyl bromide

111-83-1, n-Octyl bromide 112-29-8, n-Decyl bromide 112-71-0,
n-Tetradecyl bromide 112-82-3, n-Hexadecyl bromide 112-89-0,
n-Octadecyl bromide 120-92-3, Cyclopentanone 120-94-5,
1-Methylpyrrolidine 143-15-7, n-Dodecyl bromide 280-57-9, DABCO
504-02-9, 1,3-Cyclohexanedione 513-42-8, 2-Methyl-2-propenol 542-69-8,
n-Butyl iodide 598-56-1, N-Ethyldimethylamine 616-47-7,
1-Methyl-1H-imidazole 1122-58-3, 4-Dimethylaminopyridine 1193-55-1,
2-Methylcyclohexane-1,3-dione 1704-62-7,
2-[2-(Dimethylamino)ethoxy]ethanol 3647-69-6,
1-(Morpholin-4-yl)-2-chloroethane hydrochloride 4261-68-1,
2-(Diisopropylamino)ethyl chloride hydrochloride 5073-65-4,
2-Methyl-2-(3-oxobutyl)cyclohexane-1,3-dione 13586-68-0 16156-50-6,
Hexyl methanesulfonate 35779-04-5, 4-tert-Butyl-1-iodobenzene
90076-65-6, Lithium bis(trifluoromethanesulfonimide)
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of quaternary ammonium compds. as basic ionic liqs. in
base-catalyzed chemical reactions)
IT 16424-35-4P, 2-Pentylidenecyclopentanone 25564-22-1P,
2-Pentyl-2-cyclopenten-1-one 34084-81-6P,
2-(3-Oxobutyl)cyclohexane-1,3-dione 42558-01-0P,
2-(1-Hydroxypentyl)cyclopentanone 99178-63-9P,
4-[2-[2-(Dimethylamino)ethoxy]ethyl]morpholine 898535-33-6P,
N,N-Diisopropyl-N-[2-[2-(dimethylamino)ethoxy]ethyl]amine 898535-45-0P
959467-54-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation of quaternary ammonium compds. as basic ionic liqs. in
base-catalyzed chemical reactions)
IT 80-54-6P, β -Lilial 2169-69-9P, Ethyl
(E)-2-benzylidene-2-cyanoacetate 5411-12-1P, Chalcone epoxide
14533-87-0P, Ethyl (Z)-2-benzylidene-2-cyanoacetate 42576-97-6P
100348-93-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of quaternary ammonium compds. as basic ionic liqs. in
base-catalyzed chemical reactions)
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Anon; DE 10247578 A1 CAPLUS
(2) Anon; US 20020035297 A1 CAPLUS
(3) Anon; US 20040097755 A1 CAPLUS
(4) Anon; WO 2004029004 A1 CAPLUS
(5) Anon; WO 2005019185 A1 CAPLUS
L28 ANSWER 16 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2005:1090138 CAPLUS
DN 143:386681
ED Entered STN: 12 Oct 2005
TI Ionic liquids containing protonated primary, secondary
or tertiary ammonium ions
IN Walker, Adam John
PA The University of York, UK
SO Brit. UK Pat. Appl., 62 pp.
CODEN: BAXXDU
DT Patent
LA English
IC ICM C07C215-08
ICS C07C215-12; C07C217-30
CC 23-4 (Aliphatic Compounds)
Section cross-reference(s): 45
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI	GB 2412912	A	20051012	GB 2005-6984	20050407
	GB 2412912	B	20070711		
	AU 2005232025	A1	20051020	AU 2005-232025	20050407
	CA 2563458	A1	20051020	CA 2005-2563458	20050407
	WO 2005097731	A2	20051020	WO 2005-GB1364	20050407
	WO 2005097731	A3	20051124		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	CN 1997620	A	20070711	CN 2005-80018219	20050407
	EP 1805131	A2	20070711	EP 2005-735988	20050407
	R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR			
	JP 2007532525	T	20071115	JP 2007-506841	20050407
	MX 2006011531	A	20070326	MX 2006-11531	20061005
	IN 2006KN03208	A	20070608	IN 2006-KN3208	20061103
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PRAI	GB 2004-7908	A	20040407		
	WO 2005-GB1364	W	20050407		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
GB 2412912	ICM	C07C215-08
	ICS	C07C215-12; C07C217-30
	IPCI	C07C0215-00 [I,C]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C]; C07C0217-30 [I,A]
	IPCR	C07C0215-00 [I,C]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0215-40 [I,A]; C07C0217-00 [I,C]; C07C0217-30 [I,A]
AU 2005232025	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-00 [I,C*]; C07C0215-40 [I,A]
	IPCR	C07C0215-00 [I,C*]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
CA 2563458	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	B01J0031-02 [I,A]; B01J0031-04 [I,A]; C07C0215-40 [I,A]; C07C0215-00 [I,C*]
	IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; B01J0031-02 [I,C]; B01J0031-02 [I,A]; B01J0031-04 [I,C]; B01J0031-04 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
WO 2005097731	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-00 [ICM,7]; C07C0215-40 [ICS,7]; B01J0031-04 [ICS,7]; B01J0031-02 [ICS,7]
	IPCR	C07C0215-00 [I,C*]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0215-40 [I,A]; C07C0217-00 [I,C*]; C07C0217-30 [I,A]
CN 1997620	ECLA	C07C215/40; C07C215/08; C07C215/12; C07C217/30
	IPCI	C07C0215-40 [I,A]; C07C0215-00 [I,C*]; B01J0031-04 [I,A]; B01J0031-02 [I,A]
	IPCR	C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0215-08 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*];

EP 1805131 ECLA C07C0217-30 [I,A]
 IPCI C07C215/40; C07C215/08; C07C215/12; C07C217/30
 IPCR C07C0215-40 [I,A]; C07C0215-00 [I,C*]
 C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0215-08
 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*];
 C07C0217-30 [I,A]
 JP 2007532525 ECLA C07C215/40; C07C215/08; C07C215/12; C07C217/30
 IPCI C07C0215-40 [I,A]; C07C0215-00 [I,C*]; C07C0311-03
 [I,A]; C07C0311-00 [I,C*]
 IPCR C07C0215-00 [I,C]; C07C0215-40 [I,A]; C07C0215-08
 [I,A]; C07C0215-12 [I,A]; C07C0217-00 [I,C*];
 C07C0217-30 [I,A]; C07C0311-00 [I,C]; C07C0311-03 [I,A]
 FTERM 4H006/AA01; 4H006/AA03; 4H006/AB80
 MX 2006011531 IPCI B01J0031-02 [I,C*]; B01J0031-04 [I,C*]; C07C0215-40
 [I,A]; C07C0215-00 [I,C*]
 IN 2006KN03208 IPCI C07C0215-40 [ICM,7]; C07C0215-00 [ICS,7]
 KR 2007031302 IPCI C07C0215-40 [I,A]; C07C0215-00 [I,A]
 US 20070185330 IPCI C07C0215-02 [I,A]; C07C0215-00 [I,C*]; C07D0211-02
 [I,A]; C07D0211-00 [I,C*]
 NCL 546/184.000; 564/281.000

OS MARPAT 143:386681

AB The present invention relates to ionic liqs. comprising an anion and a cation wherein the cation is a primary, secondary or tertiary ammonium ion containing a protonated nitrogen atom. The invention also provides processes for the manufacture of ionic liqs. For example, N,N-dimethylethanolammonium glycolate (I) was prepared by gradually adding glycolic acid to an alc. solution of N,N-dimethylethanolamine; after completion and neutralization, the cold alc. solution was filtered, solvent removed, then frozen in liquid nitrogen and lyophilized in vacuo. After gradually allowing the sample to warm to room temperature, 32.85 g (99% yield) of I as a pale yellow liquid was isolated. Preferred ionic liqs. contain ethanolammonium, diethanolammonium, N-butyl-diethanolammonium, N,N-dimethylethanolammonium, N-methylethanolammonium, N,N-di(methoxyethyl)ammonium and 1-(3-hydroxypropyl)putrescine as cations.

ST amine acid; ammonium ionic liq prepn; primary ammonium ion prepn ionic liq; secondary ammonium ion prepn ionic liq; tertiary ammonium ion prepn ionic liq

IT Oxidation
 (enzymic; demonstration of application of ionic liqs. in enzymic oxidation of methanol to formaldehyde)

IT Green chemistry
 Ionic liquids
 (preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT Quaternary ammonium compounds, preparation
 RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT Acids, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT Solvents
 (preparation and methods for manufacture of ionic liqs. containing protonated primary, secondary or tertiary ammonium ions for use as solvent in industrial and com. applications)

IT Amines, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)
 (primary; preparation and methods for manufacture of ionic liqs. containing
 protonated primary, secondary or tertiary ammonium ions)

IT Carboxylic acids, uses
 Sulfonic acids, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (salts, anion component for ionic liquid; preparation and methods for
 manufacture
 of ionic liqs. containing protonated primary, secondary or tertiary
 ammonium ions)

IT Amines, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (secondary; preparation and methods for manufacture of ionic liqs.
 containing
 protonated primary, secondary or tertiary ammonium ions)

IT Amines, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (tertiary; preparation and methods for manufacture of ionic liqs. containing
 protonated primary, secondary or tertiary ammonium ions)

IT 56-14-4, Succinate, uses 57-60-3, Pyruvate, uses 63-36-5, Salicylate,
 uses 71-47-6, Formate, uses 71-50-1, Acetate, uses 71-52-3, Hydrogen
 carbonate, uses 72-03-7, Propanoate, uses 74-81-7, Octanoate, uses
 113-21-3, Lactate, uses 126-44-3, Citrate, uses 142-42-7, Fumarate,
 uses 149-61-1, Malate 150-43-6, uses 151-33-7, Hexanoate, uses
 338-70-5, uses 461-55-2, Butanoate, uses 666-14-8, uses 766-76-7,
 Benzoate, uses 769-61-9, Mandelate 3342-79-8, Nonanoate 3398-75-2,
 Decanoate 3715-17-1, Tartrate, uses 3812-32-6, Carbonate, uses
 7563-37-3, Heptanoate 7631-42-7, Phenylacetate, uses 10023-74-2,
 Pentanoate, uses 12627-13-3, Silicate 14066-19-4, Hydrogen phosphate,
 uses 14066-20-7, Dihydrogen phosphate, uses 14265-44-2, Phosphate,
 uses 14477-72-6, Trifluoroacetate ion, uses 14797-55-8, Nitrate, uses
 14808-79-8, Sulphate, uses 14874-70-5, Tetrafluoroborate 14996-02-2,
 Hydrogen sulfate, uses 16053-58-0, Methanesulfonate anion 16887-00-6,
 Chloride, uses 16919-18-9, Hexafluorophosphate 17121-12-9,
 Metaphosphate (P4O124-) 20461-54-5, Iodide, uses 20938-62-9,
 Pantothenate 24959-67-9, Bromide, uses 37181-39-8,
 Trifluoromethanesulfonate 41824-21-9, Crotonate 44864-55-3
 45048-62-2 49681-69-8, Hydrogen tartrate, uses 59561-61-4 86848-98-8
 86848-99-9 97901-86-5 98837-98-0 130434-58-1 328238-56-8
 866621-22-9
 RL: NUU (Other use, unclassified); USES (Uses)
 (anion component for ionic liquid; preparation and methods for manufacture
 of ionic
 liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 176158-74-0P
 RL: BSU (Biological study, unclassified); IMF (Industrial manufacture);
 NUU (Other use, unclassified); PRP (Properties); SPN (Synthetic
 preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (biodegradn. anal. of ionic liquid; preparation and methods for manufacture
 of ionic
 liqs. containing protonated primary, secondary or tertiary ammonium ions)

IT 20740-76-5 22852-66-0, Ethanolamine conjugate acid 26265-71-4
 36833-63-3 36833-64-4 65591-62-0 90578-97-5 866567-32-0
 866567-33-1 866567-34-2
 RL: NUU (Other use, unclassified); USES (Uses)
 (cation component for ionic liquid; preparation and methods for manufacture
 of
 ionic liqs. containing protonated primary, secondary or tertiary ammonium
 ions)

IT 67-56-1, Methanol, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (demonstration of application of ionic liqs. in enzymic oxidation of

methanol to formaldehyde)

IT 50-00-0P, Formaldehyde, preparation
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (demonstration of application of ionic liqs. in enzymic oxidation of
 methanol to formaldehyde)

IT 2471-06-9P 2604-13-9P 2805-17-6P 3178-20-9P 4337-66-0P
 5988-51-2P 7487-79-8P 16530-72-6P 16830-40-3P 17618-31-4P
 17618-32-5P 17863-38-6P 18394-23-5P 20261-59-0P 20475-13-2P
 20748-72-5P 21829-52-7P 23251-72-1P, Diethanolamine acetate
 23349-61-3P 25859-29-4P 26764-31-8P 28098-03-5P 28129-21-7P,
 Diethanolamine hydrobromide 29194-47-6P 29867-71-8P 29867-72-9P
 29867-75-2P 29868-00-6P 29868-01-7P 29870-14-2P 29870-15-3P
 29870-18-6P 29870-19-7P 29870-25-5P 29870-26-6P 29870-27-7P
 29870-29-9P 30718-92-4P 30933-06-3P 31086-83-6P 31889-13-1P
 35423-90-6P 38491-11-1P 38739-74-1P 49753-18-6P 49753-20-0P
 51264-32-5P 51276-44-9P 53226-35-0P 53562-95-1P 53926-87-7P
 54300-24-2P 55756-39-3P 56409-18-8P 56669-87-5P 57117-29-0P
 58937-21-6P 59101-30-3P 59866-70-5P 60395-28-0P 62036-98-0P
 63517-71-5P 63517-72-6P 64601-03-2P 64601-04-3P 64601-14-5P
 67303-52-0P 67384-57-0P 68141-00-4P 68141-46-8P 68391-54-8P,
 Diethanolamine formate 68568-51-4P 68815-69-0P 68833-69-2P
 68860-57-1P 68945-90-4P 69362-00-1P 69362-01-2P 75478-96-5P
 76788-90-4P 77534-69-1P 77534-73-7P 79266-74-3P 82801-62-5P
 84110-42-9P 84145-30-2P 84145-60-8P 84176-56-7P 86683-38-7P
 86683-39-8P 88331-27-5P 89855-93-6P 90000-02-5P 90434-46-1P
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 98005-86-8P 98837-33-3P 101901-23-9P 103079-19-2P 108067-35-2P
 109962-24-5P 111318-69-5P 116033-27-3P 117472-14-7P 126050-30-4P
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 866567-49-9P 866567-50-2P 866567-51-3P 866567-52-4P 866567-53-5P
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 866568-43-6P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN
 (Synthetic preparation); PREP (Preparation); USES (Uses)
 (preparation and methods for manufacture of ionic liqs. containing
 protonated
 primary, secondary or tertiary ammonium ions)

IT 866568-44-7P 866568-45-8P 866568-46-9P 866568-47-0P 866568-48-1P
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866569-30-4P	866569-31-5P	866569-32-6P	866569-33-7P	866569-34-8P
866569-35-9P	866569-36-0P	866569-37-1P	866569-38-2P	866569-39-3P
866569-40-6P	866569-41-7P	866569-42-8P	866569-43-9P	866569-44-0P
866569-45-1P	866569-46-2P	866569-47-3P	866569-48-4P	866569-49-5P
866569-50-8P	866569-51-9P	866569-52-0P	866569-53-1P	866569-54-2P
866569-55-3P	866569-56-4P	866569-57-5P	866569-58-6P	866569-59-7P
866569-60-0P	866569-61-1P	866569-62-2P	866569-63-3P	866569-64-4P
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866569-81-5P	866569-82-6P	866569-83-7P	866569-84-8P	866569-85-9P
866569-86-0P	866569-87-1P	866569-88-2P	866569-89-3P	866569-90-6P
866569-91-7P	866569-92-8P	866569-93-9P	866569-94-0P	866569-95-1P
866569-96-2P	866569-97-3P	866569-98-4P	866569-99-5P	866570-00-5P
866570-01-6P	866570-02-7P	866570-03-8P	866570-04-9P	866570-05-0P
866570-06-1P	866570-07-2P	866570-08-3P	866570-09-4P	866570-10-7P
866570-11-8P	866570-12-9P	866570-13-0P	866570-14-1P	866570-15-2P
866570-16-3P	866570-17-4P	866570-18-5P	866570-19-6P	866570-20-9P
866570-21-0P	866570-22-1P	866570-23-2P	866570-24-3P	866570-25-4P
866570-26-5P	866570-27-6P	866570-28-7P	866570-29-8P	866570-30-1P
866570-31-2P	866570-32-3P	866570-33-4P	866570-34-5P	866570-35-6P
866570-36-7P	866570-37-8P	866570-38-9P	866570-39-0P	866570-40-3P
866570-41-4P	866570-42-5P	866570-43-6P	866570-44-7P	866570-45-8P
866570-46-9P	866570-47-0P	866570-48-1P	866570-49-2P	866570-50-5P
866570-51-6P	866570-52-7P	866570-53-8P	866570-54-9P	866570-55-0P
866570-56-1P	866570-57-2P	866570-58-3P	866570-59-4P	866570-60-7P
866570-61-8P	866570-62-9P	866570-63-0P	866570-64-1P	866570-65-2P
866570-66-3P	866570-67-4P	866570-68-5P	866570-69-6P	866570-70-9P
866570-71-0P	866570-72-1P	866570-73-2P	866570-74-3P	866570-75-4P
866570-76-5P	866570-77-6P	866570-78-7P	866570-79-8P	866570-80-1P
866570-81-2P	866570-82-3P	866570-83-4P	866570-84-5P	866570-85-6P
866570-86-7P	866570-88-9P	866570-90-3P	866570-92-5P	866570-95-8P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN

(Synthetic preparation); PREP (Preparation); USES (Uses)

(preparation and methods for manufacture of ionic liqs. containing

protonated

primary, secondary or tertiary ammonium ions)

IT	866570-97-0P	866570-99-2P	866571-01-9P	866571-03-1P	866571-04-2P
	866571-05-3P	866571-06-4P	866571-07-5P	866571-08-6P	866571-09-7P
	866571-10-0P	866571-11-1P	866571-12-2P	866571-13-3P	866571-14-4P
	866571-15-5P	866571-16-6P	866571-17-7P	866571-18-8P	866571-19-9P
	866571-20-2P	866571-21-3P	866571-22-4P	866571-23-5P	866571-24-6P
	866571-25-7P	866571-26-8P	866571-27-9P	866571-28-0P	866571-29-1P
	866571-30-4P	866571-31-5P	866571-32-6P	866571-33-7P	866571-34-8P
	866571-35-9P	866571-36-0P	866571-37-1P	866571-38-2P	866571-39-3P
	866571-40-6P	866571-41-7P	866571-42-8P	866571-43-9P	866571-44-0P
	866571-45-1P	866571-46-2P	866571-47-3P	866571-48-4P	866571-49-5P
	866571-50-8P	866571-51-9P	866571-52-0P	866571-53-1P	866571-54-2P
	866571-55-3P	866571-56-4P	866571-57-5P	866571-58-6P	866571-59-7P
	866571-60-0P	866571-61-1P	866571-62-2P	866571-63-3P	866571-64-4P

866571-65-5P 866571-66-6P 866571-67-7P 866571-68-8P 866571-69-9P
 866571-70-2P 866571-71-3P 866571-72-4P 866571-73-5P 866571-74-6P
 866571-75-7P 866571-76-8P 866571-77-9P 866571-78-0P 866571-79-1P
 866571-80-4P 866571-81-5P 866571-82-6P 866622-51-7P 866622-67-5P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(preparation and methods for manufacture of ionic liqs. containing protonated

primary, secondary or tertiary ammonium ions)

IT 79-14-1, Glycolic acid, reactions 102-79-4, N-Butyldiethanolamine

108-01-0, N,N-Dimethylethanolamine 82113-65-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation and methods for manufacture of ionic liqs. containing

protonated

primary, secondary or tertiary ammonium ions)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L28 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2005:561949 CAPLUS

DN 143:229956

ED Entered STN: 30 Jun 2005

TI Synthesis and Characterization of Organometallic Ionic Liquids and a Heterometallic Carbene Complex Containing the Chromium Tricarbonyl Fragment

AU Moret, Marc-Etienne; Chaplin, Adrian B.; Lawrence, Adrien K.; Scopelliti, Rosario; Dyson, Paul J.

CS Institut des Sciences et Ingenierie Chimiques, EPFL-BCH, Lausanne, CH-1015, Switz.

SO Organometallics (2005), 24(16), 4039-4048

CODEN: ORGND7; ISSN: 0276-7333

PB American Chemical Society

DT Journal

LA English

CC 29-11 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 75

OS CASREACT 143:229956

AB Direct reaction between [Cr(CO)6] and arenes with ionic substituents affords the corresponding arene-Cr tricarbonyl complexes, [Cr(CO)3(arene)], in only modest (4-32%) yield. In contrast, these complexes can be prepared in pure form in excellent yield from the reaction of [Cr(CO)3(η6-C6H5CH2Br)] with, for example, N-methylimidazole. The structures of [Cr(CO)3(η6-C6H5CH2MIM)]Br (MIM = 3-methylimidazolium), [Cr(CO)3(η6-C6H5CH2MMIM)]Br (MMIM = 2,3-dimethylimidazolium), and [Cr(CO)3(η6-C6H5CH2NMe2Me2OH)]Br were established by x-ray diffraction anal. Subsequent exchange of the bromide anion for Tf2N- affords new organometallic salts with m.p.s. <70°. Reaction of the bromide salts includes tosylation of [Cr(CO)3(η6-C6H5CH2NMe2Me2OH)]Br to afford [Cr(CO)3(η6-C6H5CH2NMe2(CH2)2OTs)]Br and the formation of the heterometallic carbene complex [Ru(η6-p-cymene)Cl2(C4H5N2CH2Ph-η6-Cr(CO)3)]. Both compds. were characterized in the solid state by x-ray diffraction.

ST chromium tricarbonyl derivatized ionic liq prepn; benzylimidazolium chromium tricarbonyl deriv prepn structure reaction; ruthenium chromium heterometallic carbene benzylimidazole deriv prepn structure; crystal

structure chromium tricarbonyl benzylimidazolium heterometallic ruthenium benzylimidazole carbene; mol structure chromium tricarbonyl benzylimidazolium heterometallic ruthenium benzylimidazole carbene

IT Crystal structure
Molecular structure
(of chromium tricarbonyl benzylimidazolium organometallic ionic liqs. and chromium-ruthenium heterometallic benzylimidazole carbene complex)

IT Ionic liquids
(organometallic; preparation and structure of chromium tricarbonyl benzylimidazolium-containing ionic liqs. and of chromium-ruthenium heterometallic benzylimidazole carbene complex)

IT Aromatic hydrocarbons, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and structure of chromium tricarbonyl benzylimidazolium-containing ionic liqs. and of chromium-ruthenium heterometallic benzylimidazole carbene complex)

IT 862999-66-4P 862999-67-5P 862999-68-6P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(crystal structure; preparation and structure of chromium tricarbonyl benzylimidazolium-containing ionic liqs. and of chromium-ruthenium heterometallic benzylimidazole carbene complex)

IT 862999-72-2P 862999-74-4P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(crystal structure; preparation and structure of chromium tricarbonyl benzylimidazolium-containing ionic liqs. and of chromium-ruthenium heterometallic benzylimidazole carbene complex)

IT 108-01-0, 2-(Dimethylamino)ethanol 616-47-7, N-Methylimidazole 637-59-2 1739-84-0, 1,2-Dimethylimidazole 7221-41-2 13007-92-6, Chromium hexacarbonyl 52462-29-0 65039-11-4 191352-85-9 862999-80-2 862999-81-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and structure of chromium tricarbonyl benzylimidazolium-containing ionic liqs. and of chromium-ruthenium heterometallic benzylimidazole carbene complex)

IT 500996-04-3P 862999-75-5P 862999-76-6P 862999-77-7P 862999-78-8P 862999-79-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and structure of chromium tricarbonyl benzylimidazolium-containing ionic liqs. and of chromium-ruthenium heterometallic benzylimidazole carbene complex)

IT 862999-57-3P 862999-59-5P 862999-61-9P 862999-63-1P 862999-65-3P 862999-69-7P 862999-70-0P 862999-71-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and structure of chromium tricarbonyl benzylimidazolium-containing ionic liqs. and of chromium-ruthenium heterometallic benzylimidazole carbene complex)

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L28 ANSWER 18 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:753469 CAPLUS

DN 141:280342

ED Entered STN: 16 Sep 2004

TI Polymer particle dispersions, electrolytes and quasi-solid electrolytes comprising same dispersions, and batteries employing same quasi-solid electrolytes

IN Nagano, Toshiaki; Ogawa, Tetsuo

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08F002-12

ICS C08F012-00; C08F020-00; H01B001-06; H01M008-02; H01M010-40;
 H01M014-00

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

Section cross-reference(s): 38, 76

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004256711	A	20040916	JP 2003-50180	20030227
PRAI JP 2003-50180		20030227		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2004256711	ICM	C08F002-12
	ICS	C08F012-00; C08F020-00; H01B001-06; H01M008-02; H01M010-40; H01M014-00
	IPCI	C08F0002-12 [ICM,7]; C08F0012-00 [ICS,7]; C08F0020-00 [ICS,7]; H01B0001-06 [ICS,7]; H01M0008-02 [ICS,7]; H01M0010-40 [ICS,7]; H01M0010-36 [ICS,7,C*]; H01M0014-00 [ICS,7]
	IPCR	C08F0002-12 [I,A]; C08F0002-12 [I,C*]; C08F0012-00 [I,A]; C08F0012-00 [I,C*]; C08F0020-00 [I,A]; C08F0020-00 [I,C*]; H01B0001-06 [N,A]; H01B0001-06 [N,C*]; H01M0008-02 [N,A]; H01M0008-02 [N,C*]; H01M0010-36 [N,C*]; H01M0010-40 [N,A]; H01M0014-00 [N,A]; H01M0014-00 [N,C*]
	FTERM	4J011/AA05; 4J011/KA01; 4J011/KA15; 4J011/KB08; 4J011/KB19; 4J011/KB28; 4J011/KB29; 4J011/KB30; 5G301/CA30; 5G301/CD01; 5H026/AA06; 5H026/HH01; 5H026/HH05; 5H026/HH06; 5H029/AJ06; 5H029/AM16; 5H029/DJ09; 5H029/HJ01; 5H029/HJ05; 5H029/HJ20; 5H032/AA06; 5H032/AS16; 5H032/EE01; 5H032/EE07; 5H032/EE16; 5H032/HH01; 5H032/HH04; 5H032/HH08

AB Polymer particle dispersions comprise ionic liqs. as disperse media. Also claimed are electrolytes with elec. conductivity between (1 + 10⁻⁹) and (1 + 10⁷) S/cm. The (quasi-solid) electrolytes are suitable for

dye-sensitized solar cells, secondary lithium batteries, and fuel cells.

ST polymer particle dispersion ionic liq medium; electrolyte polymer particle dispersion ionic liq; quasi solid electrolyte polymer particle dispersion ionic liq; lithium battery quasi solid electrolyte ionic liq disperse medium; dye sensitized battery quasi solid electrolyte ionic liq dispersion

IT Secondary batteries
(lithium; polymer particle dispersions containing ionic liquid disperse media, for (quasi-solid) electrolytes and batteries)

IT Electrolytes
Ionic liquids
(polymer particle dispersions containing ionic liquid disperse media, for (quasi-solid) electrolytes and batteries)

IT Solar cells
(quasi-solid electrolytes; polymer particle dispersions containing ionic liquid disperse media, for (quasi-solid) electrolytes and batteries)

IT Battery electrolytes
(quasi-solid; polymer particle dispersions containing ionic liquid disperse media, for (quasi-solid) electrolytes and batteries)

IT 64-19-7DP, Acetic acid, reaction products with cresol novolak epoxy resins and amines, polymer with acrylic monomers 100-42-5DP, Styrene, polymers with cresol novolak epoxy resins quaternary ammonium salts, polymer with acrylic monomers 108-01-0DP, N,N-Dimethylaminoethanol, reaction products with cresol novolak epoxy resins and acetic acid, polymer with acrylic monomers 6606-59-3DP, 1,6-Hexanediol dimethacrylate, polymers with cresol novolak epoxy resins quaternary ammonium salts, polymer with acrylic monomers 78949-77-6P, 1,6-Hexanediol dimethacrylate-styrene copolymer 181140-08-9DP, ESCN 195 acrylate, reaction products with amines and acetic acid, polymer with acrylic monomers 757973-29-8P 757973-30-1P 757973-31-2P

RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(crosslinked, particles; polymer particle dispersions containing ionic liquid disperse media, for (quasi-solid) electrolytes and batteries)

IT 35935-34-3, 1-Methyl-3-ethylimidazolium iodide
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(ionic liqs.; polymer particle dispersions containing ionic liquid disperse media, for (quasi-solid) electrolytes and batteries)

L28 ANSWER 19 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:580287 CAPLUS

DN 141:270457

ED Entered STN: 21 Jul 2004

TI Phosphazene-Based Ionic Liquids: Synthesis, Temperature-Dependent Viscosity, and Effect as Additives in Water Lubrication of Silicon Nitride Ceramics

AU Omotowa, Banidele A.; Phillips, Benjamin S.; Zabinski, Jeffery S.; Shreeve, Jean'ne M.

CS Department of Chemistry, University of Idaho, Moscow, ID, 83844-2343, USA

SO Inorganic Chemistry (2004), 43(17), 5466-5471
CODEN: INOCAJ; ISSN: 0020-1669

PB American Chemical Society

DT Journal

LA English

CC 78-8 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 29, 57, 65

OS CASREACT 141:270457

AB Phosphazene rings with alkoxy chain substituents, N3P3(R)(R')5 [R = allyloxy, R' = 2-(dimethylamino)ethoxy (1); R = R' = 2-(dimethylamino)ethoxy (2); R = R' = 4-pyridylmethoxy (3)] and N4P4R8 [R

= 3-(dimethylamino)propoxy] (4) were synthesized and quaternized at the substituent nitrogen by treatment with Me iodide at 35° over 3-6 h to give polyiodo salts (5-8), resp. Subsequent metathesis with LiN(SO₂CF₃)₂ gave the resp. ionic salts (9-12) or, with NaBF₄, 7 gave (13). The amide salts, 9-12, were viscous liqs. with pour points at 55-100°, and the tetrafluoroborate salt, 13, was a solid, m.p. 168°. The comps. of 2 and 5-13 were confirmed by elemental anal. and spectroscopic methods. Compds. 1, 2, and 4 were viscous liqs. (d₂₅ = 1.67 g cm⁻³; η₂₅ = 0.76-1.56 mPa s⁻¹) with pour points at .apprx.15°. The solid polyquaternary salts, 5-8, melted at 130-194°. The ionic liqs., 9-12, had an average d. of .apprx.1.73 g cm⁻³ at 25°, and viscosities (25°) ranged between 68.3 and 139.2 mPa s⁻¹. A plot of the viscosities of 9-12 vs. temperature revealed an almost linear correlation between 55 and 120°. Friction and wear properties of water with 0.25% of 9-12 as boundary lubricant additives were evaluated on Si₃N₄/Si₃N₄ ceramic interfaces. The most significant observation is that they caused a decrease in the running-in period.

ST alkoxy phosphazene ionic liq prepn viscosity silicon nitride lubricant; cyclophosphazene alkoxy ionic liq prepn viscosity silicon nitride lubricant

IT Lubrication
(boundary; preparation of trimethylammonioalkoxy- and methylpyridiniomethoxy-substituted phosphazene-based ionic liqs., temperature-dependent viscosity, and effect as additives in water lubrication of silicon nitride ceramics)

IT Density
Ionic liquids
Pour point
Viscosity
(preparation of trimethylammonioalkoxy- and methylpyridiniomethoxy-substituted phosphazene-based ionic liqs., temperature-dependent viscosity, and effect as additives in water lubrication of silicon nitride ceramics)

IT Cyclophosphazenes
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)
(preparation of trimethylammonioalkoxy- and methylpyridiniomethoxy-substituted phosphazene-based ionic liqs., temperature-dependent viscosity, and effect as additives in water lubrication of silicon nitride ceramics)

IT Lubricants
(water-based; preparation of trimethylammonioalkoxy- and methylpyridiniomethoxy-substituted phosphazene-based ionic liqs., temperature-dependent viscosity, and effect as additives in water lubrication of silicon nitride ceramics)

IT 756526-84-8P 756526-86-0P 756526-88-2P 756526-90-6P
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)
(preparation of trimethylammonioalkoxy- and methylpyridiniomethoxy-substituted phosphazene-based ionic liqs., temperature-dependent viscosity, and effect as additives in water lubrication of silicon nitride ceramics)

IT 108-01-0, N,N-Dimethylamino-2-ethanol 940-71-6, Hexachlorotriphosphazene 2950-45-0, Octachlorotetraphosphazene 3179-63-3, N,N-Dimethylamino-3-propanol 89490-86-8,

(Allyloxy)pentachlorotriphosphazene 90076-65-6, Lithium
bis(trifluoromethylsulfonyl)amide

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of trimethylammonioalkoxy- and
methylpyridiniumomethoxy-substituted phosphazene-based ionic liqs.,
temperature-dependent viscosity, and effect as additives in water

lubrication

of silicon nitride ceramics)

IT 211054-44-3P 211913-55-2P 756526-77-9P 756526-78-0P 756526-79-1P
756526-80-4P 756526-81-5P 756526-82-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

(preparation of trimethylammonioalkoxy- and
methylpyridiniumomethoxy-substituted phosphazene-based ionic liqs.,
temperature-dependent viscosity, and effect as additives in water

lubrication

of silicon nitride ceramics)

IT 756526-91-7P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of trimethylammonioalkoxy- and
methylpyridiniumomethoxy-substituted phosphazene-based ionic liqs.,
temperature-dependent viscosity, and effect as additives in water

lubrication

of silicon nitride ceramics)

IT 12033-89-5, Silicon nitride (Si3N4), uses

RL: TEM (Technical or engineered material use); USES (Uses)

(preparation of trimethylammonioalkoxy- and
methylpyridiniumomethoxy-substituted phosphazene-based ionic liqs.,
temperature-dependent viscosity, and effect as additives in water

lubrication

of silicon nitride ceramics)

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L28 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2004:328162 CAPLUS
DN 141:313871
ED Entered STN: 22 Apr 2004
TI Room temperature ionic liquids - new choline derivatives
AU Pernak, J.; Chwala, P.; Syguda, A.
CS Faculty of Chemical Technology, Poznan University of Technology, Poznan, 60-965, Pol.
SO Polish Journal of Chemistry (2004), 78(4), 539-546
CODEN: PJCHDQ; ISSN: 0137-5083
PB Polish Chemical Society
DT Journal
LA English
CC 23-4 (Aliphatic Compounds)
OS CASREACT 141:313871
AB New room temperature ionic liqs. R1O(CH2)2N+Me2CH2OR2 -N(SO2CF3)2 (I, R1 = H, COMe, R2 = Et, n-Pr, C10H21, etc.) - choline derivs. were prepared by Menschutkin reaction with alkyl chloromethyl ethers and anion changed to bis(trifluoromethylsulfonyl)amide ion. The newly obtained butoxymethyl(2-hydroxyethyl)dimethylammonium bis(trifluoromethanesulfonyl)amide I (R1 = H, R2 = n-Bu) was successfully tested as a solvent for O-acylation of deanol with acid chlorides in a two-phase reaction system. The ionic liquid-catalyst system was recycled and reused.
ST room temp ionic liq prepn solvent acylation deanol; alkoxyethylhydroxyethylammonium trifluoromethanesulfonylamide ionic liq prepn solvent acylation deanol; green chem alkoxyethylhydroxyethylammonium trifluoromethanesulfonylamide ionic liq solvent; ammonium trifluoromethanesulfonylamide alkoxyethylhydroxyethyl ionic liq prepn solvent acylation deanol
IT Esterification
Ionic liquids
(preparation of alkoxyethyl(hydroxyethyl)dimethylammonium trifluoromethanesulfonylamides as room temperature ionic liqs. and use as solvent for O-acylation of deanol)
IT 646068-99-7P
RL: CAT (Catalyst use); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of alkoxyethyl(hydroxyethyl)dimethylammonium trifluoromethanesulfonylamides as room temperature ionic liqs. and use as solvent for O-acylation of deanol)
IT 767320-88-7P
RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of alkoxyethyl(hydroxyethyl)dimethylammonium trifluoromethanesulfonylamides as room temperature ionic liqs. and use as solvent for O-acylation of deanol)
IT 98-88-4, Benzoyl chloride 108-01-0, Deanol 111-64-8, Octanoyl chloride 112-13-0, Decanoyl chloride 2351-69-1, Chloromethyl butyl ether 3188-13-4, Chloromethyl ethyl ether 3587-57-3, Chloromethyl propyl ether 13497-61-5, Chloromethyl dodecyl ether 19416-65-0, Chloromethyl pentyl ether 24566-90-3, Chloromethyl octyl ether 24566-91-4, Chloromethyl nonyl ether 24566-92-5, Chloromethyl decyl ether 24566-93-6, Chloromethyl undecyl ether 39979-92-5, Chloromethyl hexyl ether 49791-06-2, Chloromethyl heptyl ether
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of alkoxyethyl(hydroxyethyl)dimethylammonium

trifluoromethanesulfonylamides as room temperature ionic liqs. and use as solvent for O-acylation of deanol)

IT 1421-89-2P, 2-(Dimethylamino)ethyl acetate 38954-45-9P 38954-46-0P
 38954-47-1P 38954-48-2P 38954-49-3P 646068-98-6P 646069-00-3P
 646069-01-4P 646069-02-5P 767320-70-7P 767320-71-8P 767320-76-3P
 767320-77-4P 767320-78-5P 767320-79-6P 767320-80-9P 767320-81-0P
 767320-82-1P 767320-83-2P 767320-84-3P 767320-85-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of alkoxymethyl(hydroxyethyl)dimethylammonium trifluoromethanesulfonylamides as room temperature ionic liqs. and use as solvent for O-acylation of deanol)

IT 90076-65-6
 RL: RGT (Reagent); RACT (Reactant or reagent)
 (preparation of alkoxymethyl(hydroxyethyl)dimethylammonium trifluoromethanesulfonylamides as room temperature ionic liqs. and use as solvent for O-acylation of deanol)

IT 2208-05-1P 36609-93-5P 129320-08-7P 767320-73-0P 767320-75-2P
 767320-86-5P 767320-89-8P 767320-90-1P 767320-91-2P 767320-92-3P
 767320-93-4P 767320-94-5P 767320-95-6P 767320-96-7P 767320-98-9P
 767321-00-6P 767321-02-8P 767321-04-0P 767321-06-2P 767321-08-4P
 767321-10-8P 767321-12-0P 767321-14-2P 767321-16-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of alkoxymethyl(hydroxyethyl)dimethylammonium trifluoromethanesulfonylamides as room temperature ionic liqs. and use as solvent for O-acylation of deanol)

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L28 ANSWER 21 OF 21 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:56092 CAPLUS

DN 140:270820

ED Entered STN: 23 Jan 2004

TI Triazine-Based Polyfluorinated Triquaternary Liquid Salts: Synthesis, Characterization, and Application as Solvents in Rhodium(I)-Catalyzed Hydroformylation of 1-Octene

AU Omotowa, Bamidele A.; Shreeve, Jean'ne M.

CS Department of Chemistry, University of Idaho, Moscow, ID, 83844-2343, USA

SO Organometallics (2004), 23(4), 783-791
 CODEN: ORGND7; ISSN: 0276-7333

PB American Chemical Society

DT Journal

LA English

CC 28-19 (Heterocyclic Compounds (More Than One Hetero Atom))
 Section cross-reference(s): 23, 67

OS CASREACT 140:270820

AB Silylation of N-(2-hydroxyethyl)imidazole, HOCH₂CH₂Im (1), with hexamethyldisilazane gave N-(2-trimethylsilyloxyethyl)imidazole, Me₃SiOCH₂CH₂Im (2), which underwent quaternization reactions with the alkyl halides and gave three new N-(trimethylsilyloxyethyl) imidazolium halides, Me₃SiOCH₂CH₂Im+RX-, where Im+ = imidazolium and R/X = Me/I (3), CH₂CH₂F/Br (4), and CH₂CH₂CF₃/I (5). The Et ether, formed from 1 and Et bromide was quaternized with CF₃CH₂CH₂I followed by anion exchange with LiN(SO₂CF₃)₂ to obtain [CF₃CH₂CH₂Im+CH₂CH₂OEt N(SO₂CF₃)₂-] (8). The metathesis reactions of 3-5 with cyanuric fluoride in acetonitrile at 25° gave tris[2-(N'-alkylimidazolium)ethoxy]triazine trihalides, N3C3(OCH₂CH₂Im+RX-)₃, where R/X = Me/I (9), CH₂CH₂F/Br (10), and CH₂CH₂CF₃/I (11). Two neutral trimeric compds., N3C3(OCH₂CH₂Im)₃ (12) and N3C3(OCH₂CH₂NMe₂)₃ (14), were prepared from reactions of cyanuric fluoride and Me₃SiOCH₂CH₂NMe₂ or 2, resp. The quaternization of 12 with MeI gave tris[oxoethyl(trimethyl)ammonium]triazine, N3C3(OCH₂CH₂N+Me₃I-)₃ (14). Subsequent exchange of the halides in 9-11 and N3C3(OCH₂CH₂N+Me₃I-)₃ (15) with the weakly coordinating anions of AgOSO₂CF₃, LiN(SO₂CF₃)₂, AgNO₃, or AgClO₄ resulted in new triquaternary salts that were characterized by NMR, elemental analyses, and, for some of the compds., mass spectroscopy. Phys. (m.p. and d.) and thermal properties of compds. prepared were determined with differential scanning calorimeter (DSC) and thermogravimetric analyzer (TGA). In Rh(I)-catalyzed hydroformylation of 1-octene, with Ph₂P(NMPBTA) [NMPBTA = N-methylpyridinium bis(trifluoromethanesulfonyl)amide] as ligand, the turnover frequency (TOF), conversion, isomer selectivity (n/i), and recyclability were compared when triquaternary salts or monoquaternary were used as solvents in the biphasic hydroformylation process. A change of metal/ligand ratio resulted in significant increase of n/i selectivity, but was marginal with 8 as solvent.

ST triazine polyfluorinated triquaternary liq salt prepn solvent; rhodium catalyzed hydroformylation octene polyfluorinated triazine triquaternary liq solvent; thermogravimetric thermal property polyfluorinated triazine triquaternary liq salt solvent

IT Solvents
 (ionic liqs.; synthesis, characterization, and application of triazine-based polyfluorinated triquaternary liquid salts as solvents in rhodium-catalyzed hydroformylation of octene)

IT Quaternary ammonium compounds, preparation
 RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (solvents; synthesis, characterization, and application of triazine-based polyfluorinated triquaternary liquid salts as solvents in rhodium-catalyzed hydroformylation of octene)

IT Differential scanning calorimetry
 Hydroformylation catalysts
 Ionic liquids
 Thermal properties
 Thermogravimetric analysis
 (synthesis, characterization, and application of triazine-based polyfluorinated triquaternary liquid salts as solvents in rhodium-catalyzed hydroformylation of octene)

IT 673686-75-4P 673687-58-6P 673687-65-5P
 RL: NUU (Other use, unclassified); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent);

USES (Uses)

- (solvent, thermal properties; synthesis, characterization, and application of triazine-based polyfluorinated triquaternary liquid salts as solvents in rhodium-catalyzed hydroformylation of octene)
- IT 14874-82-9, (Acetylacetonato)dicarbonylrhodium
 RL: CAT (Catalyst use); USES (Uses)
 (synthesis, characterization, and application of triazine-based polyfluorinated triquaternary liquid salts as solvents in rhodium-catalyzed hydroformylation of octene)
- IT 673687-18-8P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (synthesis, characterization, and application of triazine-based polyfluorinated triquaternary liquid salts as solvents in rhodium-catalyzed hydroformylation of octene)
- IT 107-07-3, 2-Chloroethanol, reactions 108-01-0, 2-N,N-Dimethylaminoethanol 111-66-0, 1-Octene 288-32-4, Imidazole, reactions 460-37-7, 3,3,3-Trifluoropropyl iodide 675-14-9, Cyanuric fluoride 762-49-2, 1-Bromo-2-fluoroethane 1079-66-9, Chlorodiphenylphosphine 3430-13-5, 5-Bromo-2-methylpyridine 90076-65-6, Lithium bis(trifluoromethylsulfonyl)amide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (synthesis, characterization, and application of triazine-based polyfluorinated triquaternary liquid salts as solvents in rhodium-catalyzed hydroformylation of octene)
- IT 1615-14-1P, 1-(2-Hydroxyethyl)imidazole 16654-64-1P 132682-77-0P 197712-86-0P 673686-35-6P 673686-67-4P 673687-75-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (synthesis, characterization, and application of triazine-based polyfluorinated triquaternary liquid salts as solvents in rhodium-catalyzed hydroformylation of octene)
- IT 124-19-6P, Nonanal 7786-29-0P, 2-Methyloctanal
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (synthesis, characterization, and application of triazine-based polyfluorinated triquaternary liquid salts as solvents in rhodium-catalyzed hydroformylation of octene)
- IT 673687-83-7P
 RL: CAT (Catalyst use); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (thermal properties; synthesis, characterization, and application of triazine-based polyfluorinated triquaternary liquid salts as solvents in rhodium-catalyzed hydroformylation of octene)
- IT 132684-26-5P 673686-41-4P 673686-48-1P 673686-55-0P 673686-81-2P 673686-87-8P 673686-90-3P 673686-95-8P 673687-12-2P 673687-24-6P 673687-32-6P 673687-39-3P 673687-46-2P 673687-50-8P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (thermal properties; synthesis, characterization, and application of triazine-based polyfluorinated triquaternary liquid salts as solvents in rhodium-catalyzed hydroformylation of octene)

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=> d his

(FILE 'HOME' ENTERED AT 12:57:44 ON 19 MAR 2009)

FILE 'REGISTRY' ENTERED AT 12:58:22 ON 19 MAR 2009

E N,N-DIMETHYLETHANOLAMMONIUM FORMATE/CN

E E2

L1 I S E3

FILE 'CAPLUS' ENTERED AT 13:01:52 ON 19 MAR 2009
 L2 1 S US20070185330/PN
 L3 2 S DIMETHYLETHANOLAMMONIUM AND FORMATE

FILE 'CAPLUS' ENTERED AT 13:15:01 ON 19 MAR 2009

FILE 'REGISTRY' ENTERED AT 13:15:11 ON 19 MAR 2009
 L4 2 S 59101-30-3/RN OR 53518-18-6/RN

FILE 'CAPLUS' ENTERED AT 13:16:40 ON 19 MAR 2009
 S 59101-30-3/REG#

FILE 'REGISTRY' ENTERED AT 13:18:46 ON 19 MAR 2009
 L5 1 S 59101-30-3/RN

FILE 'CAPLUS' ENTERED AT 13:18:47 ON 19 MAR 2009
 L6 6 S L5
 L7 56 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND (FORMIC O
 L8 0 S IONIC AND L7
 L9 55 S L7 NOT L6
 L10 62 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND IONIC
 L11 6 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND (IONIC LI
 E WALKER ADAM JOHN/AU
 L12 12 S E2 OR E3
 L13 12 S L12 AND IONIC
 L14 0 S (DIMETHYLAMINOETHANOL OR DIMETHYLAMINO ETHANOL) AND L13
 S 59101-30-3/REG# AND L13

FILE 'REGISTRY' ENTERED AT 13:38:11 ON 19 MAR 2009
 L15 1 S 59101-30-3/RN

FILE 'CAPLUS' ENTERED AT 13:38:11 ON 19 MAR 2009
 L16 6 S L15
 L17 1 S L16 AND L13
 L18 0 S L10 AND L13

FILE 'REGISTRY' ENTERED AT 13:39:17 ON 19 MAR 2009
 E DIMETHYLAMINOETHANOL/CN
 E DIMETHYLAMINO ETHANOL/CN
 L19 0 S C3H11O1N1/MF
 L20 0 S C3H11ON/MF
 L21 0 S C3H11NO/MF

FILE 'CAPLUS' ENTERED AT 13:42:24 ON 19 MAR 2009
 L22 2798 S DIMETHYLAMINOETHANOL
 S L13 AND 108-01-0/REG#

FILE 'REGISTRY' ENTERED AT 13:44:06 ON 19 MAR 2009
 L23 1 S 108-01-0/RN

FILE 'CAPLUS' ENTERED AT 13:44:06 ON 19 MAR 2009
 L24 6910 S L23
 L25 2 S L13 AND L24
 S 108-01-0/REG# AND (IONIC LIQUID#)

FILE 'REGISTRY' ENTERED AT 13:45:18 ON 19 MAR 2009
 L26 1 S 108-01-0/RN

FILE 'CAPLUS' ENTERED AT 13:45:18 ON 19 MAR 2009
 L27 6910 S L26
 L28 21 S L27 AND (IONIC LIQUID#)

=> logoff y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

79.70

519.67

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-17.22

-90.20

STN INTERNATIONAL LOGOFF AT 13:47:34 ON 19 MAR 2009